

Irish Independent

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IRELAND'S NATIONAL NEWSPAPER

Radiation

DANGEROUS confusion still exists about the levels and extent of radioactive contamination in Europe following the Chernobyl disaster in the Soviet Union.

This state of affairs is largely due to the criminal irresponsibility of Soviet authorities in failing to alert the world about this major nuclear accident for several crucial days.

It was a nonsense for Kremlin officials yesterday to blame "local experts" for not making a "correct assessment of the accident".

For the past 10 days, the radiation cloud from Chernobyl has been blown hither and thither across Europe with fall-out reaching high levels especially in those countries nearest the Soviet Union.

There is no guarantee that Ireland did or will escape contamination, although radiation here has been found to be minimal. Still, the Government is obliged to take all necessary steps to ensure the safety of the atmosphere and our food supplies.

In Brussels yesterday, E.E.C. Trade Ministers agreed in principle to ban fruit, vegetables and meat imports from Eastern Europe as a wise safety precaution.

The Ministers, including Ireland's Mr. Michael Noonan, are to meet again today to work out the details of the ban.

Chernobyl has galvanised the campaign here to put increasing pressure on Britain to close down the nuclear re-processing plant at Sellafield in Cumbria on the Irish Sea.

Both Fianna Fail's Charles Haughey and Progressive Democrat leader Desmond O'Malley are on the record in favour of this.

While it is right that every precaution must be taken at home and abroad to protect this country from radioactivity from whatever source, there is little to be gained from panic over-reaction to this danger.

A balanced, positive, well-informed approach is what is called for.

'No danger' from fall-out

By DAMIAN McHUGH

THE Tanaiste and Minister for Energy, Mr. Spring, last night reassured the public that the levels of radiation fallout detected here were "insignificant" and there was no cause for concern. However, the Minister, after a day-long meeting of the special inter-departmental committee on the issue, announced a number of measures based on the committee's advice.

Milk samples throughout the entire country will be tested by the Nuclear Energy Board with Civil Defence personnel deployed to collect the samples. Imports of foodstuffs from countries seriously affected by the Chernobyl accident will also be tested for contamination at points of entry. These will be continuously reviewed and, if necessary, such imports will be banned.

Screening procedures to assess contamination levels will be available for persons arriving from countries which were seriously affected and notices about this are being displayed at ports and airports.

Mr. Spring was also advised by the Nuclear Energy Board that persons intending to

travel to Eastern Europe should avoid badly contaminated areas, particularly in the Ukraine and north eastern Poland. The Minister issued his statement after nine hours of talks by the committee, which represents the Departments of Energy, Health, Environment, Defence, Agriculture and Communication and the Nuclear Energy Board.

from a health point of view. "There is no need for any restriction on the use of milk and people should feel free to drink as much as they wish".

Dr. Noel Nowlan, of the board, told the **IRISH PRESS** that there were no indications that rainwater would be a problem. Samples were taken and checked and the results would be known today.

The background radiation

A reactor at a Lancashire nuclear power station was shut down yesterday after a fire, but there was no release of radioactivity during the blaze, at the Heysham plant said the British Central Electricity Generating Board. No one was evacuated or injured and the fire, in a transformer, was put out by the plant's automatic system.

The board advised the Minister last night that there should be no concern about consuming milk and foodstuffs and that radioactivity detected in air samples between Friday and Sunday had been found to be only one-tenth of the levels reported in Britain.

The board which issued its own statement last night, said the quantities of fallout detected in milk in the Leinster area were "extremely low" and were not significant

level in parts of the North has risen by 40 p.c. as a result of the Chernobyl disaster but the scientists say it is not a cause for alarm.

A spokesman for the Northern Ireland Office said yesterday that scientists had analysed samples of drinking water and milk over the last few days, and although the radiation level was higher than the natural radiation level, there was "no cause for concern".

Meanwhile the Fianna Fail Chief Whip, Mr. Vincent Brady TD is to table a Private Members Motion in the Dail requesting the Government to demand the closure of the British Sellafield nuclear complex and to undertake a complete review of the plans for the protection of the civilian population in the event of fallout from a nuclear disaster.

And the Irish environmental organisation Earthwatch, said last night: "What we are receiving now in Ireland, alarming though it is, is merely a taste of a distant accident". If this accident had taken place in Britain instead of nearly 2,000 miles away, the consequences for Ireland would have been disastrous".

Fallout from Chernobyl at deadly levels

A MAJOR report on the effects of the Chernobyl disaster on Ireland will this week reveal "extremely high" levels of radiation in some areas.

Radioactive Cesium levels of 20,000 to 25,000 becquerels have been found in soils, grass and other pasture in the south west, midlands, south midlands and north east, according to Dr. John Cunningham of the Nuclear Energy Board.

"While radioactive levels in other areas are much lower it is a very variable picture I'm afraid," he said.

Yesterday, Dr. Patricia Sheehan said it was something of a lottery as to how much radioactivity was picked up by cattle and sheep grazing such pastures or how much found its way into vegetables.

By FELICITY ARBUTHNOT

Cesium which can cause cancers, miscarriages, and birth defects, could be passed on to humans in contaminated meat, milk and vegetables.

The accepted safety level in food products in Ireland is 100 becquerels per kilogram or litre. In Sweden radiation in food stuffs since Chernobyl is restricted to 330 becquerels per kilo. EEC countries allow 600 becquerels — so only at levels exceeding this could imports to food to Ireland be restricted.

Dr. Sheehan said the optimum level in infant food and milk here was 370.

But she disclosed that in the midlands, levels as

high as 585 becquerels had been found in vegetables. Lamb from Kilkenny had shown between 478 and 600 becquerels with levels of 560 in Sligo, 440 in Donegal, 370 in Cork and 420 in Wexford.

Dr. Cunningham said the Nuclear Energy Board plans an extensive study on the way different soils are affected by radioactive elements. Plans are also under way to develop efficient emergency procedures in the event of another major nuclear accident.

"One has to look at the effects of an accident from a British station," Dr. Cunningham said.

"Alarms which would be triggered automatically by any radioactive release, such as exist on the Isle of Man, are also under consideration," he said.

Fall-out cloud arrives

By Christine Newman
TRACES of radioactive fall-out reached Ireland last night from the Chernobyl disaster in Russia. At 6 p.m., the Nuclear Energy Board detected an increase in radioactivity over the east coast. It is believed the fall-out drifted across from Britain.

Dr. John Cunningham, Chairman of the NEB, said: "Current indications are that the levels are extremely low and are unlikely to represent a health hazard."

Work was proceeding to identify the quantities and substances involved. The board was monitoring the situation carefully and looking at rainfall levels. They would be testing throughout the country.

The Tanaiste and Minister for Energy, Mr. Spring said that an interdepartmental committee would meet early today to assess available information and to decide what steps, if any, should be taken.

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Fallout level up — milk concern

Continued from Page One.

No concern had been expressed to his organisation by the public about a radioactive threat to milk, but just because people did not express such a view did not mean they did not have it.

"Milk consumption until this has been alright. It is a worry, but we are hoping people won't react."

Meanwhile, Fianna Fail leader Charles Haughey, speaking on a private member's motion in the Dail last night, called for the abolition of the Nuclear Energy Board which he described as "little better than a public relations front for the nuclear industry."

He said the board

should be replaced with a new Radiological Protection Institution with greatly revised powers and functions. The board had been "complacent and compliant to the point of irresponsibility . . ."

Mr. Haughey asked if the NEB had been continually monitoring the level of radioactivity in the air, water and soil so that a sudden rise could be detected from our domestic resources. All the evidence was that we had none of these things.

There had been an inexcusable delay in taking any action and the hurriedly-assembled, ad hoc inter-departmental committee clearly showed that no plan existed to deal with this sort of situation.

DON'T DRINK THE RAINWATER

**Holiday
time is
rained off**

RAIN stopped Bank Holiday play, keeping most families at home yesterday.

And the few who braved the downpours and biting cold to go to the coast packed up earlier than usual.

The weather centre said it was "pretty miserable everywhere" and the AA reported quieter than normal roads.

A spokesman said: "There were one or two busy places around scenic and other attractions.

"But generally not a lot was happening."

By ROGER BEAM
BRITONS were warned yesterday not to drink fresh rainwater because of radiation from the Russian nuclear disaster.

And the cloud of radiation from the Chernobyl power plant which had been blown over Britain now seems to be on its way back.

Experts said: "The cloud will be hovering over Europe for a long time and at the moment it appears to be heading for Scotland."

The warning about rainwater was aimed at people living in the coun-

New warning as cloud heads back

tryside who use it as their main water source.

The National Radiological Protection Board said: "We have recently collected samples of fresh standing rainwater and tests showed they contained fairly high levels of short-lived radiation.

Cancer

"We advise people not to drink any collected since May 3."

But it said there was no real danger and it was just taking precautions.

There is believed to be

no threat to water in reservoirs.

"The radioactivity, already extremely diluted, would become even more so in large areas of water," it said.

Up to 8,000 Europeans could develop cancer from radiation caused by the disaster at Chernobyl power plant, Swedish scientists claimed yesterday.

Most victims would be in the Ukraine and nearby parts of Eastern Europe.

Austria banned the sale

of fresh vegetables yesterday after finding a high-level of radiation.

Britain's Agriculture Minister Michael Joplin said there was no need for alarm about vegetables in this country.

Imported food was also being tested, he said.

Police sealed off Scarborough Docks yesterday after reports that a Danish ship was contaminated with nuclear fallout.

Experts were going there last night to examine the ship.

LY
FOR

BRITAIN

(EIRE 28p)

★★★★ 18p

Blaze shuts down A-plant reactor

A NUCLEAR reactor was shut down yesterday after a blaze at a power station in Morecambe, Lancs.

The fire broke out in a transformer. Automatic alarm systems immediately shut down the reactor, which is 50 yards away. And automatic extinguishers doused the blaze before firemen arrived.

Power station bosses launched an immediate investigation. But last night a spokesman for the Central Electricity Generating Board said: "No one was

injured, no one was evacuated and there was no release of radioactivity.

THE PUBLIC should have been informed about an accident at Dungeness nuclear power station in Kent, Shadow Environment Secretary Dr John Cunningham said yesterday. He told BBC TV that the delay led to the very thing the Board wanted to avoid—accusations of a cover up.

● Don't Drink Rainwater—Page Two.



George Michael, Paul Young, Annie Lennox, Eric Clapton, Phil Collins, Elton John and Tina Turner.

DIARY

Sickness fear in Kiev

AS SOVIET engineers work frantically to seal off the Chernobyl reactor reports now suggest that widespread symptoms of radiation sickness are beginning to appear throughout Kiev.

According to the Ukrainian Central Information Service

there is "great commotion and much anxiety."

"Many people in Kiev have already begun to show signs of radiation sickness—watering eyes, vomiting and pimpled lips.

"Hospitals are full and affected people are being sent to medical centres."

There are also reports of

dead fish floating on the surface of a nearby reservoir, and of leaves beginning to wither on the trees.

Already, there is a major exodus from Kiev, with anxious citizens thronging the railway station, bus depots and the airport.

At Moscow's Kievsky station the concourse has been

packed for more than a week as trainloads of women and children have come in from the Ukraine.

Russian security forces, sensitive about the exodus, tried to stop Press coverage of it in the West.

Thousands of children have already been sent away to stay with relatives or friends

Sellafield pressure by EEC

AN ALL-PARTY committee of the European Parliament has voted to take Britain to the European Court for refusing access to EEC commission nuclear officials to the nuclear reprocessing plant at Sellafield.

The legal action has been sparked by reports that, contrary to government denials, plutonium has been transferred from the civil to the military stockpile at Sellafield.

The European Parliament energy committee is proposing that both the British government and the Commission be taken to the European Court in Luxembourg because of the secret agreement reached recently between the two bodies governing safety controls. The Government has persistently refused to allow commission nuclear safety inspection officials access to Sellafield.

Although the decision to open legal action against the UK Government has to be confirmed by the full parliament, this is likely to be given. There has been widespread dissatisfaction among European Parliamentarians, and also senior commission officials, at the refusal of the British Government to permit EEC inspection.

Commenting on the committee's decision, Mr. Llew Davis, the Labour MEP for South Wales said: "In reality it is the government and not the commission which is in the dock. For as a senior official in the nuclear industry has confirmed it is the British Government which is keeping the terms of the agreement with the commission secret."

"It is understood that the agreement does deal with what role inspectors from Euratom, the European Community Nuclear Regulatory Agency would have in checking on

movements in the plutonium stockpile in Sellafield," he added.

"The agreement became necessary when the nuclear industry was forced to admit that, despite Government denials plutonium had been transferred," said Mr. Smith. Another Labour MEP Mr. Alec Falconer said that the British Government could not be trusted since it had said it would end secrecy in the nuclear industry but was now refusing to honour that commitment.

A living memorial

PARIS: While towns and villages all over Europe sadly remembered their war dead at Armistice Day ceremonies last week, the small French village of Beuzeville-au-Plain, near Cherbourg, was celebrating rather than mourning.

Since 1870, although the younger villagers have fought in all major wars, all have come home safely. Ten men from Beuzeville marched off to the 1914-18 war, eight went to war in 1939, two fought in Algeria and one in Indo-China. And all survived.

Beuzeville must be the only village in France without a war memorial to its dead.

Reactor is buried

MOSCOW: Soviet workers have completed the burial of the stricken Chernobyl reactor, blocking the escape of radiation from the centre of the world's worst nuclear accident.

It has been entombed "for centuries" in reinforced concrete, the Communist Party daily Pravda reported yesterday.

The reactor caught fire and exploded in April in an accident which Soviet investigators later blamed on a series of perilous experiments conducted by Chernobyl staff.

About 30 people died, mostly from radiation poisoning, and 135,000 were evacuated from the area, which is 80 miles from Kiev.

World News

Nuclear exodus continues

RUSSIA said yesterday that thousands of people were struggling to neutralise the stricken Chernobyl nuclear plant where a reactor was still smouldering, as anxious residents sought to leave the nearby city of Kiev.

The Communist Party daily Pravda reported from near the plant that helicopters were still dropping sand on the damaged reactor to provide greater protection from its nuclear core.

"No, regrettably the struggle with it is not finished. It is continuing and thousands of people are conducting it with even greater energy than Wednesday," Pravda said.

The government newspaper Izvestia said the nuclear reactor was still smouldering, in the first acknowledgement that there was still a fire at Chernobyl.

The article lauded the bravery of those who "in conditions of risk are eliminating the consequences of the accident, who are extinguishing the still smouldering embers of this fire."

Western experts have said the graphite core of the reactor was probably afire and would slowly burn itself out.

Soviet cleanup crews have been dumping tons of sand, lead and other materials on to the reactor by helicopter to cut off radioactivity and presumably also the fire's oxygen supply.

The head of the International Atomic Energy Agency, Hans Blix, was reported to be in Kiev continuing his talks with Soviet officials about the disaster that Russia say sent at least 204 people to the hospital and killed three, the latest death being reported by TASS yesterday.

Officials have said that workers and experts at the reactor underestimated the scope of the accident. But they have claimed the situation is under control now and there is no immediate health risk to the general population outside the evacuated area.

Indications were emerging that Chernobyl town, about 20 miles from the reactor com-

plex, was not evacuated immediately. The exact population of the town could not immediately be determined but was believed to be around 30,000.

A senior Western diplomat, who spoke on the condition that he not be identified, said yesterday: "Chernobyl (town) itself was not evacuated in the first days. I don't think evacuation was ordered until after the Premier, Nikolai Ryzhkov, visited on May 2, nearly a week after the disaster."

The official news agency, TASS, said they ordered unspecified additional measures to cope with the accident. The diplomat, who did not reveal his sources, said: "Our information is that at least in that town, the evacuation was still going on two days ago."

Women and children from Kiev continued to arrive in Moscow in their hundreds yesterday and some told reporters they had left as a precaution against radiation.

Official confirmation of concern in the city of 3.5 million people came on Wednesday night in an unusually frank report by TASS. It said people were queueing for rail and air tickets and that extra trains and flights had been laid on.

TASS said a change of wind direction over the past few days had raised radiation levels in Kiev but not enough to be a threat to health.

● British weather experts believe a radioactive plume is still being emitted from the damaged Chernobyl nuclear power station. A round-the-clock watch is being mounted by weathermen in Britain in case the wind changes and more radioactivity is swept towards Britain. "As far as we know, the radioactive plume is still being emitted," said a spokesman for the British Meteorological Office.

'PR front' nuclear board should be abolished — Haughey



● CHARLES HAUGHEY
... allegation of "cover-ups."

THE international nuclear industry was accused last night of "lies and cover-ups" by Fianna Fail leader Charles Haughey who claimed that scores of accidents, leaks and security lapses had been concealed from the public.

He also accused the Irish Nuclear Energy Board of being a "public relations front" and demanded its abolition.

Introducing a Finna Fail Dail motion in private members' time, calling on the Government to demand the closure of the Sellafield nuclear plant, Mr. Haughey said there were no safe means of disposing of nuclear waste.

"The people in charge do not know how to dismantle a nuclear power station when its active life is over", he declared. "Yet there are now dozens of these lethal installations in existence which are capable of wiping out large sections of humanity, while more are still being built".

The process of deception, he said, had gone on too long. Every time there was an accident or incident, they were told that some new monitoring system or some new safety mechanisms were being installed.

"Will this process of deception continue until the final disastrous explosion occurs?" he asked. "What will they say then? Will those who have lied and deceived us be brought to trial for crimes against humanity?"

Mr. Haughey said that since the disaster at Chernobyl it was now obvious there was a real doubt about our ability to control nuclear power.

The distinction between atoms for war and atoms for peace was becoming less and less significant. "When a deadly nuclear cloud of radioactivity drifts unpredictably around our globe, it does not really matter whether it had civilian or military origins", he said.

It was no longer enough for countries who wished to do so to remain nuclear free zones, said Mr. Haughey. "Our international environment is now polluted by something that happened in an installation in the Ukraine even the existence of which would not have been known to more than a handful of people in this country", he added.

He said that quite a few days after the extent of the Chernobyl disaster became apparent, the Tanaiste and Minister for Energy said that the Nuclear Energy Board had advised him that the increase in radiation levels were unlikely to constitute a health hazard.

"What does that mean?" he asked. "Do they or do they not constitute a health hazard? Why is there this constant fudging, these attempts to conceal and cover-up?"

Mr. Haughey said the attitude of the Government to the "deadly danger" posed to the Irish people by Sellafield had been feeble and ambiguous.

The NEB was a little better than a public relations front for the nuclear industry, he alleged. It was "complacent and complaint to the point of irresponsibility" and should now be abolished.

Tokyo plea for tighter N-safety

LEADERS of the seven summit nations meeting in Tokyo agreed yesterday to issue a declaration calling for tighter international regulations on nuclear safety following the disaster at the Soviet Union's Chernobyl power plant.

Spokesmen said the leaders discussed in detail a West German draft for a special statement during an evening dinner and dispatched senior aides to draw up a text ready for release today.

White House spokesman, Larry Speakes, said the summit would call in particular for improved accident reporting procedures and the need for swifter notification of disasters of the Chernobyl type.

Most of the summit states

have severely criticised Russia's secrecy over the atomic disaster and its failure to warn neighbouring states that a cloud of radioactivity was heading for their territory.

West German Chancellor Helmut Kohl had called for the Tokyo meeting to insist on changes in the statutes of the Vienna-based International Atomic Energy Agency (IAEA) which allow nuclear

states 40 days to report leaks or accidents.

French spokeswoman, Michelle Gendreau - Massaloux, said the discussion had become fairly technical on the issue of nuclear safety standards. The leaders had agreed on the need to reinforce the IAEA or another competent body, she added.

British officials said the text of the agreement would note Moscow's failure to issue timely warnings of the Chernobyl leak but avoid strong criticism of Moscow.

In West Germany the government reported higher soil radioactivity as a result of the Soviet accident and ordered geiger-counter controls on fresh green vegetables.

Bonn took the lead in pushing for a summit statement in response to Chernobyl and Dr. Kohl yesterday reiterated West German demands that Moscow close down all reactors of the same type as the stricken power unit in the Ukraine.

British officials said all the summit leaders felt there was now a need to restore confidence in nuclear power among the public and to draw experience from the Soviet tragedy.

They cited the example set by the United States after the Harrisburg nuclear accident in 1979, when Washington issued full details within three months, and said Moscow must be urged to follow suit.

The summit statement would reflect the seven nations' wish to set certain minimum standards for both the operation of nuclear power plants and the manufacture of components, they added.

A Soviet press report on Chernobyl published a month before the disaster complained of substandard work and materials at the plant.

UN nuclear expert for USSR

THE United Nations nuclear energy agency announced yesterday its chief director and two nuclear experts will go to Moscow at the Kremlin's invitation in connection with the accident at the Chernobyl atomic power station.

Several of the European countries that detected a rise in radiation after the accident on April 26 said yesterday levels had improved, but Japan yesterday reported the radiation had spread there.

Sweden, whose discovery of fallout last week was the West's first clue that there had been fire and radiation leak in the Soviet Union, proclaimed the worst to be over.

Government officials in Stockholm said some of safety precautions taken in Western Europe were an over-reaction.

At the Tokyo economic summit, President Reagan expressed support for a West

German-sponsored call for the participants to issue a demand for tighter international regulations on nuclear power.

West German officials said Japan already supported the move and they were sure it would be approved by the leaders of the other summit participants — Italy, Britain, France and Canada.

Mildly radioactive rain fell on Japan yesterday and the Science and Technology Agency cautioned against drinking unfiltered rain water but said the radioactivity was well below tolerance levels.

A brief statement by the Vienna-based International Atomic Energy Agency (IAEA), the U.N. body which promotes the peaceful uses of nuclear energy, announced that director, Hans Blix, and two unnamed senior experts would leave for Moscow today.



Chernobyl: Kremlin blames local authorities

KREMLIN officials yesterday blamed local authorities for not appreciating the seriousness of the Chernobyl accident, but said there was no danger to health outside the area around the power station.

EEC countries said they were ready to ban food imports from Eastern Europe once they had agreed on details, and many countries took precautions over consumption of drinking water, dairy produce and fresh vegetables.

Radiation experts in Western Europe said food in some places would be slightly contaminated for years.

At a Moscow news conference, Boris Shcherbina, leading an investigation into the accident, repeated the official death toll of two and said 100 people were contaminated.

He said the Soviet Union had issued "honest information" on the incident as soon as it became clear what had happened.

Local officials failed to grasp the magnitude of the mishap, which began with a chemical explosion, he said.

The only Soviet health warning so far came yesterday. The Ukrainian Health Ministry advised people in the Kiev area to avoid buying some locally grown vegetables and to "spend less time walking around"

In some eastern and northern parts of Sweden, farmers have been told to keep cattle indoors and Swedes are being advised not to drink rain water or eat wild vegetables.

In Copenhagen, radiation experts from East and West, who held a day of talks at the World Health Organisation's European headquarters to draft health guidelines, complained about lack of information from the Soviet Union.

"There is no immediate danger and there has been no immediate danger outside the accident zone," a spokesman said. But on the long-term effects, he said: "The problem is that we have no way of measuring it now."

Milk posed no general risk for children or pregnant women and breastfeeding was safe, he said. But in some areas radioactive rainfall might require restrictions on milk, the washing of fresh vegetables and curbs on rainwater for drinking.

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Milk posed no general risk for children or pregnant women and breast feeding was safe, he said. But in some areas radioactive rainfall might require restrictions on milk, the washing of fresh vegetables and curbs on rainwater for drinking.

On the banning of food imports from "suspect" countries he said the scientists felt restrictions on East European countries were not necessary.

Ground level radiation levels were up to 2,000 times normal in some parts of West Germany, with the high figure reported in Saarland state near the French border.

SOIL POSIONED

Environmental authorities said at least one element found in the contaminated soil — Cesium 137 — typically survives more than 30 years, raising concern about the fallout's long-term effects on health and agriculture.

Farmers in North-Rhine Westphalia were shown on West German TV with fields of lettuce and spinach left unharvested, after government warnings of soil contamination.

Official figures from Britain's independent nuclear watchdog showed radiation levels in milk in many parts of the country — while still safe — were up to 10 times higher than those published by the Government.

The new figures from the National radiological Protection Board came as Environment Secretary Mr. Kenneth Baker said tests showed there was NO hazard to health and that the radioactive cloud was now moving away.

Earlier NRPB chief Mr. John Dunster that a "few tens" of people might die from cancer because of the disaster.

Austria yesterday banned the sale of vegetables grown in the open and stepping up border controls.

Vehicles were sprayed clean and some Soviet railway wagons refused entry.

**Washed
veg is
'active'**

TESTS carried out in Britain after the Chernobyl disaster show that vegetables and salads remain radioactive even after thorough washing.

Dr John Coggle and Dr Colin Bowl of London's St Bartholomew's Hospital found that spinach picked after the nuclear cloud passed over Britain showed no significant decrease in radiation despite having been washed.

A-PLANT IS STILL LEAKING

By NICHOLAS DAVIES, Foreign Editor
RUSSIA admitted last night that its stricken Chernobyl nuclear reactor was still leaking radiation—17 days after the accident.

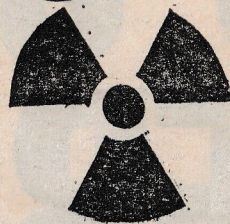
Officials also revealed that last week a "China Syndrome" meltdown into the earth very nearly occurred. The so-called China Syndrome is taken from the film of that name in which a meltdown reactor core buried its way from America towards the earth's centre and would have emerged in China.

Scientists, however, have dismissed the possibility of a core being able to penetrate anything like that far.

Weight

A senior Russian scientist said yesterday that the clean-up operation at Chernobyl will take months and that the stricken reactor will have to be sealed in concrete for centuries.

It was also disclosed that 4,000 tons of sand,



lead and concrete had been poured from helicopters on to the reactor to try to make it safe.

At one stage, scientists feared the weight might have pushed the reactor core through the concrete base and into the earth's crust.

This would have caused further nuclear leaks into the atmosphere and would have contaminated the Ukraine's water supply.

But despite the accident, the Kremlin said it intends to build more plants of the same type, although more safety resources are likely to be included.

Funds delay hits nuclear test on milk

By PAM McKAY

THE Nuclear Energy Board said yesterday that they could have got results more quickly on the monitoring of radiation in milk if they had got funds from the Government earlier. They had been looking for finance to develop their food monitoring programme for over a year.

This week they were given the go-ahead to get a new £45,000 detection system and five new members of staff for the staff for the food monitoring system.

Dr. Tony Colligan, of the Nuclear Energy Board, said that they could have produced the information faster if they had already expanded their monitoring programme.

The new piece of equipment is a germanium counting system, which works much faster than the less sophisticated detectors which they use for most of their analysis. It will allow them to monitor radiation levels in milk on a regular basis.

Many of the creameries had been on to the NEB since the Chernobyl disaster, asking them to monitor their milk. He said that they would be examining milk at least every fortnight, and possibly twice a week.

He said they still needed two more detectors and they could examine radioactivity levels in vegetables.

Meanwhile Civil Defence is getting new equipment to measure radiation leaks from Sellafield in the event of an accident. They are awaiting delivery of 60 low-level radiation monitors, which are more suitable for testing fallout from a nuclear plant accident than the existing equipment.

● Yesterday the EEC Commission formally announced cattle and pigs from seven eastern European countries have been banned with immediate effect. Imports of fruit and vegetables, milk and milk products and poultry are to be banned from today.

Nuke Aid call to Sting

★ STING and Elton John have been asked to join Russian stars for a huge, Live Aid-style concert in Moscow's Gorky Park to raise money for victims of the Chernobyl disaster.

The show is being organised by Russia's top singing star, glamorous Alla Pugacheva.

With the help of the Young Communist League, Alla has already persuaded all of the USSR's top bands—including Autograph, who performed on Live Aid — to take part.

Sting has been asked because he sang in Italy with Alla two months ago. And Elton because he gave a concert tour of Russia in 1979.

The concert will be televised throughout the country and all money will be given to help ease the suffering of nuclear fall-out victims.

Weather

Cloudy in the west
and northwest.
Bright spells
elsewhere.
Details: Page 2.

THE IRIS

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Deaths at N-plant admitted

SOVIET authorities said last night that two people died in the nuclear power plant accident at Chernobyl amid reports of a mass evacuation of people from the surrounding areas.

An official Soviet statement said radiation in the area had been stabilised and the local population had been evacuated after the accident which had destroyed part of the structural elements of the building housing a nuclear reactor.

Finnish tourists returning from Kiev, about 80 miles from the plant, said that 25,000 people had been evacuated.

And reports from foreign workers in the region of the nuclear plant said an area 20 miles round the station had been declared a security zone. At least 30,000 people live in the zone, mainly in the town of Pripjat, 10 miles from the plant. A telephone operator in the town told a western journalist that there had been an evacuation. Then she was cut off.

The Soviet statement, from the Council of Ministers, said "priority measures have been taken to deal with the effects of the accident . . . and the necessary medical aid is being given to those affected."

Polish fear on children's milk

POLAND yesterday restricted the sale of milk and said infants and children in north eastern regions would be treated for possible radioactive iodine contamination from fallout released by the damaged Soviet nuclear power plant.

State television said increased levels of radioactive iodine, a major component of nuclear fallout, were detected in the air until 3 p.m. after which time the iodine density began to decline.

As a result, the Government announced a ban on the sale of milk from cows that feed on fresh grass and said medical services would treat children and infants to remove any increased iodine levels from the body, the TV report said.

Radioactive iodine can cause cancer if it lodges in the thyroid gland. The medical treatments made available by the Government would apparently be in the form of tablets.

In the US, nuclear experts said the nuclear plant damage

the nuclear power plant accident at Chernobyl amid reports of a mass evacuation of people from the surrounding areas.

An official Soviet statement said radiation in the area had been stabilised and the local population had been evacuated after the accident which had destroyed part of the structural elements of the building housing a nuclear reactor.

Finnish tourists returning from Kiev, about 80 miles from the plant, said that 25,000 people had been evacuated.

And reports from foreign workers in the region of the nuclear plant said an area 20 miles round the station had been declared a security zone. At least 30,000 people live in the zone, mainly in the town of Pripyat, 10 miles from the plant. A telephone operator in the town told a western journalist that there had been an evacuation. Then she was cut off.

The Soviet statement, from the Council of Ministers, said "priority measures have been taken to deal with the effects of the accident... and the necessary medical aid is being given to those affected."

The statement gave no date for the accident, which is believed to have occurred last Sunday, and its wording did not mention a fire at the plant or say the situation was under control.

Polish fear on children's milk

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In the US, nuclear experts said the nuclear plant damaged at Chernobyl was used to manufacture plutonium for nuclear weapons.

World reaction—page 6

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A Swedish expert said the Chernobyl reactor appeared to have suffered a melted reactor core.

Professor Jens Scheer, of Bremen University, West Germany's leading expert on the Soviet nuclear programme, told Reuters it was conceivable the disaster could cause 10,000 deaths through lung cancer in a 300-mile radius of the plant in the next 10 years.

Winds key to fallout risk here

THERE IS no reason to fear that radioactive fallout from the damaged nuclear plant at Kiev will reach Ireland in the immediate future, the Nuclear Energy Board said yesterday.

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The board said there was little chance that prevailing weather would carry contamination towards Ireland in the next few days and that there was no cause for alarm.

A spokesman for the Meteorological Office said last night that if there is a wind shift in the next few days it is likely that there will be detectable radiation fallout in the atmosphere from the Kiev plant, although it will have been diluted to a large extent before reaching Ireland.

Eurovision carries on

The Norwegian city of Bergen — host to the Eurovision Song Contest — was attracting big crowds despite fears of radioactive fallout from the crippled Soviet nuclear plant. Report: page 4.

USSR attacks food ban



Mikhail Gorbachev — no visible action yet.

THE Soviet Union yesterday attacked West European plans to ban East bloc food imports after the Chernobyl nuclear accident, saying they were unjustified and part of a campaign to create a virtual state of madness.

Foreign Ministry spokesman, Vladimir Lomeiko, also gave fresh confirmation that local misjudgment delayed word of the April 26 Ukrainian disaster reaching Moscow.

In other criticism of the incident, the official daily, Pravda, reported the punishment of three officials who neglected evacuees in their charge after the accident.

"There is no danger whatsoever for the health of the people of Europe", Lomeiko said when asked at a briefing about the EEC's agreement in principle to ban imports of food from the Soviet Union and six Eastern European states.

He said Moscow was used to

discriminatory measures against the Communist countries by the West. "They're trying to make a policy out of this unfortunate event", he said.

"First, fanning it up, leading public opinion to a virtual state of psychosis... uncontrolled in some West European countries, then using it to justify discriminatory measures."

Lomeiko repeated Soviet charges, made over the past 10 days, that the United States had led a campaign to whip up hysteria around the accident in order to smear Moscow and sabotage its efforts to curb nuclear arms.

Attacking the Western press for exaggeration and false reporting, he held up a copy of the New York Post with the banner headline: "Mass Grave — 15,000 reported buried".

He said the World Health Organisation had declared Soviet food free from contamination, except for produce from the immediate Chernobyl zone.

Ukrainian officials said last week that crops, meat and milk from all but the 20-mile zone was safe and would continue to be sold.

Defending Moscow against

charges that it withheld news of the accident, Lomeiko said: "The people who dealt with the accident initially did not understand what they were dealing with in reality".

This point has emerged over the past week in explanation from senior Soviet and local Ukrainian officials who have said Moscow was told of the gravity of the accident only 48 hours after it took place early on Saturday, April 26.

The first evacuation began 36 hours after the explosion.

Lomeiko declined to say when Soviet leaders, Mikhail Gorbachev, might make a statement on the disaster.

So far Gorbachev has taken no visible action over Chernobyl nor said a public word on it, although two senior Politburo figures visited the scene.

The Ministry spokesman repeated official reports that the reactor was now under control and all danger averted. He refused to give updated casualty figures.

In an interview published by the West German magazine, Der Spiegel, on Saturday, the head of the Soviet Novosti News Agency said four people had died as a

result of the accident and 204 had been injured.

Meanwhile, the Polish Government yesterday invited Western experts to inspect its anti-radiation controls, saying the EEC ban on fresh food imports from Eastern Europe could cost Poland hundreds of millions of dollars.

Deputy Foreign Trade Minister, Andrzej Dorosz, said Poland intended to protest at the Community's decision but would not try to seek compensation from private Western food importers for violating contracts.

• In Westminster, Energy Secretary, Mr Peter Walker, came under Opposition pressure in the Commons yesterday to drop plans for the controversial new nuclear power station at Sizewell, Suffolk.

But Mr Walker insisted that decisions on the pressurised water reactor proposed must await publication of Sir Frank Layfield's inquiry report expected in September.

Labour's Mr Ken Weetch (Ipswich) warned that Energy Secretary that there were "misgivings and forebodings" in

many parts of East Anglia following the failure of Soviet technology at Chernobyl.

"You could ease feelings in East Anglia a great deal if you would act decisively and recommend the cancellation of the pressurised water reactor," he urged.

Mr Walker said: "This is a matter for the Sizewell inquiry and decisions on that will be taken when the report is received."

Mr Walker also rejected a call from former Labour Energy Secretary, Mr Tony Benn, to "suspend work and expenditure on the PWR until the full report of the Chernobyl inquiry is ready for examination in this country".

Tory Mr Michael Portillo urged Mr Walker to ensure that the debate on civil nuclear power was conducted rationally. The UK industry was "neither safer nor more dangerous" than before the Chernobyl accident, he said. Mr Walker agreed, adding: "Anybody looking at the long-term problems of energy will recognise the tremendous advantages to the world as a whole throughout the next century through having this form of energy."

EEC set to ban east bloc foods

COMMON Market trade ministers have put off a decision about whether to ban imports of fruit, vegetables and meat from Eastern Europe in the wake of the Chernobyl nuclear accident.

But it is expected that the measures could be agreed at a meeting in Brussels today as long as there have been no objections from any of the 12 EEC member states.

Trade and Industry Minister Michael Noonan, said there had been a "very strong, emerging consensus" that an import ban could be introduced, probably today, when the national re-

presentatives meet again for a lower-level meeting.

The emergency trade ban was proposed following a special meeting of the European Commission and covers imports into the EEC of fruit vegetables, milk, fresh and processed meat, game and freshwater fish.

The East European countries affected all fall within a 650-mile radius of Chernobyl, and include Bulgaria, Hungary, Poland, Rumania, Czechoslovakia and the Soviet Union itself.

East Germany and Yugoslavia are considered to be outside the danger zone, but imports from these countries would be carefully checked.

Desmond hits at Sellafield

THE Chernobyl nuclear disaster has added to the grave disquiet of the Irish people towards the Sellafield processing plant in the U.K., Health Minister Barry Desmond told an international health conference yesterday.

Speaking in Geneva at the 39th World Health Assembly, he said he hoped that the major lessons from the crisis have not been lost on "our nearest neighbour".

He promised that monitoring for radioactivity which has been carried out on the east coast will be extended to cover the entire country.

"In addition, the Irish Department of Health is involved in a number of epidemiological studies dealing with the possible long-term effects of radiation on human health."

In a thinly-veiled reference to the lack of information from the Russians in the aftermath of the disaster, Mr. Desmond said it

must be ensured that in all future cases of accidents of this kind there will be immediate notification of the nature and extent of the accident.

At home, Tanaiste and Minister for Energy, Dick Spring, last night called for a balanced view of the situation at Sellafield. But he admitted that the frequency of incidents at the plant had caused the Government and the Irish people to lose confidence in its safety.

Mr. Spring, who was replying to the Fianna Fail motion on Sellafield, pointed out that monitoring indicated that the radiation exposure of the Irish public from the power station was negligible.

But he added: "We are being exposed to a potential hazard from an operation from outside our jurisdiction." This, he said, made the problem an international one.

"SOMETHING'S managed to escape from the concentration camp . . ."

THANKS to Soviet secrecy and bungling we still have no idea how large the radio-active fall-out has really been from the nuclear disaster at Chernobyl.

But the political fall-out all around the world is already becoming crystal clear. This is the chance for which the anti-nuclear power lobby has been waiting.

Never mind about needing to ascertain the full facts. Already it is being confidently claimed that the Soviet accident "proves" the inherent lack of safety in nuclear power and the need not merely to halt all new station building, but close down existing ones as well.

COME OUT NOW WITH THE FACTS

Of course it proves nothing of the kind. Certainly the whole affair is something about which the civil nuclear industry in every country will want to learn. It is quite essential that the Russians now come out with the facts in full.

But it is patently obvious that the Soviet-designed reactor which went wrong bears no relation to the infinitely more secure and tested systems in the West, almost all of which have been operating with complete safety for many years.

Even when something did go wrong, as at Three Mile Island in 1979, the design was so robust that no one was injured at all — a fact which the anti-nuclear lobby overlooked.

The reality, so often ignored by the propagandists against nuclear power, is that it has proved to be one of the safest ways known to man, and the cleanest, of producing the massive amounts of electricity which modern civilisation and high quality living standards require.

SUFFERING FROM PAST

All round the globe nuclear power stations have been running without harm and pollution and probably with less radioactive risk than you would get from walking past a coal pit or a day's sun-tanning.

It is true that the handling and re-processing of the so called "spent" nuclear fuel, which in Britain is mostly done at Sellafield, has caused several problems. But while no matter concerning radioactive contamination can ever be treated lightly, the truth

about Sellafield is that it is suffering from its past.

Radioactive waste was being handled there (when it was called Windscale) years before the modern ultra-safe nuclear power industry was developed, and this has left a legacy of difficulties. But that is a challenge for the future.

Moreover, nuclear power is not just cleaner, it is cheaper. Even when the colossal building cost has been fully allowed for, electricity can be produced at prices which undercut coal and oil. And that is quite aside from the bitter experience we have all had of the political unreliability of both coal and oil supplies.

Why, then, do so many fears exist about civil nuclear power?

Part of the answer is that people associate it with nuclear weapons and the bomb. In fact, there is no way in which a power station could become a bomb,

although plenty of people have been happy to encourage the fear that there is.

Partly, too, the problem is that the whole technology has been shrouded in quite unnecessary mystery.

When I visited a Japanese nuclear station recently, sited near a fishing village, I was fascinated to see how Japanese schoolchildren were encouraged to visit the plant and were shown every detail of how it worked.

OPEN CULTURE

There is a real need for civil nuclear power to come out of its shell and improve its rotten public relations. In the coming months the whole industry will be really put to the test on this score.

But what is really at issue after the Chernobyl fire is not nuclear power station building but the whole political system under which this peculiar kind of Soviet reactor came to be designed, constructed and operated.

It is not so much nuclear but Soviet power that is on trial . . .

by the Rt. Hon.

DAVID HOWELL

Secretary of State for Energy 1979-81

TORY MP FOR GUILDFORD

The successful and safe management of modern, very high technology requires an open culture, open exchange of ideas, open links with other countries, and openness with the public.

These are simply not the characteristics of the Soviet Communist system. It would be quite monstrous if the failures of this furtive, secretive, overcentralised and inefficient society were now to put at risk the rest of the world's development of clean, safe and cheap nuclear electricity for the benefit of mankind.

REAL MESSAGE

Let us by all means give the Soviets as much help as they will accept in clearing up the mess at Chernobyl. But let us also remember the real message coming out of these events.

Closed societies, where people are frightened to speak up and frightened to think, make a poor climate in which to handle and grapple with all the complexities of something as sophisticated as nuclear power.

No one country can go it alone in such areas. No one country has the right to try to do so. It was not so much nuclear power as the very nature of Soviet power, which last week was put squarely on trial.

Cummings



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EXCLUSIVE**My suicide mission—by the man who walked into Chernobyl**

'We only knew we had to stay until the fire was out. It was our duty'

THE hero of Chernobyl told yesterday how he and a handful of men fought the world's worst nuclear disaster.

Fire fighter Leonid Teljatnikov led what he knew was a suicide mission to beat the blaze raging in the stricken plant.

He was exposed to such massive doses of deadly radiation that he is now doomed to die.

But he said yesterday: "We only knew we had to stay until the fire was out. It was our duty to other people."

Leonid, 35, had never previously tackled anything more serious than a peat fire in a local store.

But for more than three hours he and his team faced the terrifying hell of Chernobyl alone.

They fought and overcame the flames leaping from the damaged reactor.

They fought and beat the poisonous fumes that choked and blinded them throughout their ordeal.

But Leonid knew he had no hope of fighting the radioactivity to which he was exposed.

the plant's fire chief four years ago. "There is a fire in the machine room. The roof is blazing."

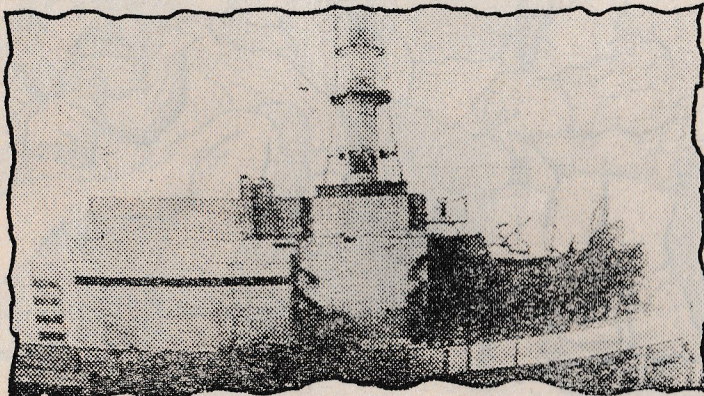
Leonid immediately rushed to the plant—to

Several times Leonid climbed to the top of the 230ft-high burning building to direct operations at the very heart of the blaze. Eventually the roof caved

who were allowed to visit him at the clinic had to wear protective clothing—not for themselves, but in case they passed on an infection to Leonid.

He is the only radiation victim so far allowed by the Russian authorities to talk about the disaster and its aftermath.

Secrecy



RAVAGED: The Chernobyl nuclear plant hit by disaster.



By RONALD RICKETTS

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Trapped

Doctors have told him that he has virtually no chance of recovering from the radiation that has destroyed his body's ability to fight infection.

The still - cheerful Russian, now in a special clinic in Moscow said: "In the end we lost all sense of time.

"We didn't know how many people were trapped at the fire - we only knew we had to stay."

Task

The disaster that was to stun the world started for Leonid as he lay in bed with his wife at their home near the plant.

Suddenly he was woken by the telephone.

An urgent voice told him the news he had dreaded since becoming

the plant's fire chief four years ago. "There is a fire in the machine room. The roof is blazing."

Leonid immediately rushed to the plant - to find the interior a raging inferno.

In the reactor room flames were leaping more than 50 feet high and were spreading quickly.

Support

His first task, he realised, was to prevent the fire spreading to one or more of the three other reactor plants at the nuclear complex.

"The fire could have easily spread through cable ducts to the other reactors," he explained.

As the battle to control the flames went on, geiger counters showed that the firefighters were being exposed to huge doses of radiation.

Thick poisonous gas was another hazard. It filled the building making it difficult to see and to breathe.

Several times Leonid climbed to the top of the 230ft-high burning building to direct operations at the very heart of the blaze. Eventually the roof caved in.

But the desperate fight to bring the fire under control was only the start of Leonid's horror. The real hell began later.

Doctors diagnosed that he had been exposed to fatal doses of radiation and he was admitted to the clinic in Moscow.

The doctor in charge of the clinic Professor Angelina Guskova, admits: "To survive what he has been through will certainly not be easy."

As he waits for the inevitable, Leonid has written to his wife Larisa and their two young sons Oleg and Michail back in Kiev, telling them not to worry.

His only solace comes from visits by his father and four sisters who have been taken to Moscow to be near him.

"They are a good psychological support for me," he says.

Two Russian newsmen

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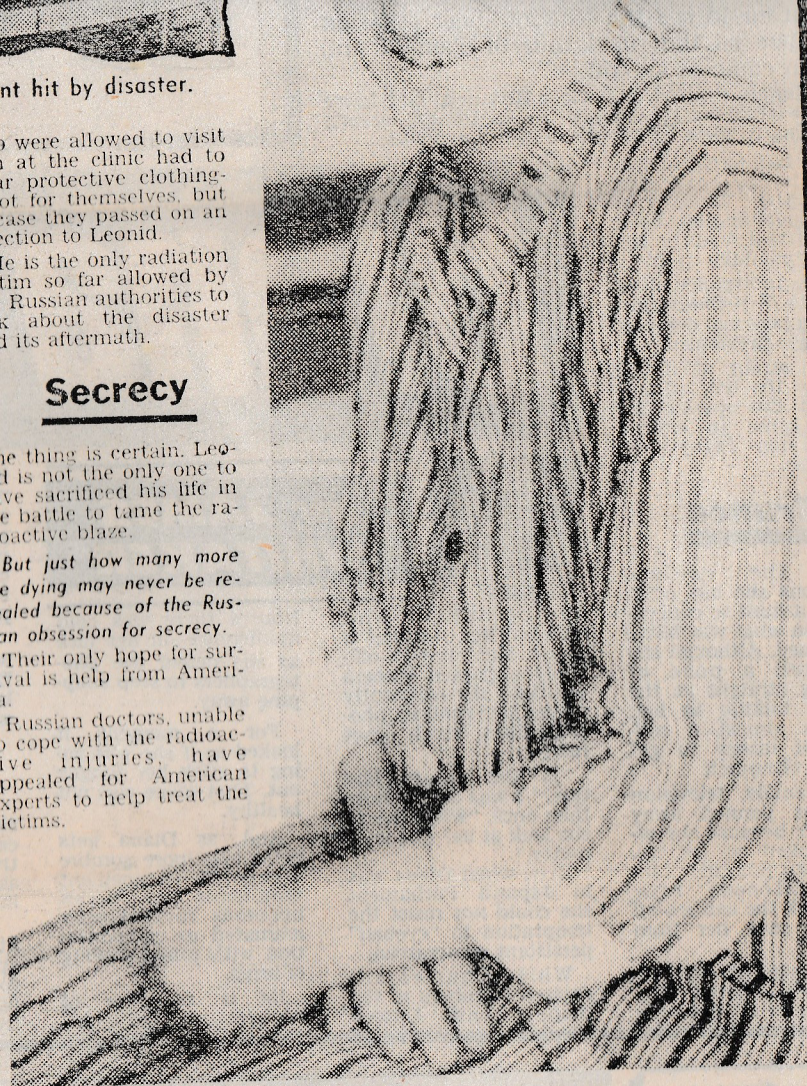
Secrecy

One thing is certain. Leonid is not the only one to have sacrificed his life in the battle to tame the radioactive blaze.

But just how many more are dying may never be revealed because of the Russian obsession for secrecy.

Their only hope for survival is help from America.

Russian doctors, unable to cope with the radioactive injuries, have appealed for American experts to help treat the victims.



STILL SMILING: Nuclear blaze hero Leonid in the special clinic

**Waiting to die..the hero
who led three-hour
blaze battle at A-plant**

LEAK AT NUCLEAR PLANT

A REACTOR at Sizewell nuclear power station was shut down yesterday after a fuel can leaked a small quantity of low-level radiation.

The Central Electricity Generating Board said the leak did not endanger workers or people living near the nuclear station in Suffolk.

It said the radioactivity was con-

tained within the reactor's gas coolant system.

● Eight tonnes of radioactive carbon dioxide gas leaked from the Hinkley Point power station in Somerset last November because of a badly fitting nut and bolt, an inquiry report said yesterday.

● What is radioactivity?

A: All known substances are made up of what are described as elements. Some of these elements give off 'rays', a number of which are more penetrating than others. Most of these rays, in normal circumstances, are harmless, but others — known to scientists as high energy radiation — pose a threat to all forms of life. Radiation of course is given off, normally, by elements in the environment such as rocks, minerals and naturally occurring gases.

● What is so special about radioactivity in the nuclear world?

A: Basically what happens in a nuclear reactor is that radioactive substances react in such a way as to produce heat. This process heats water which produces steam. The steam, in turn, drives turbines which generate electricity. Once this radioactive material is contained safely it is a highly efficient and economical source of energy. On the other hand, should it escape, it poses enormous health risks.

● For how long does radioactive material remain dangerous?

A: This depends on the radioactive level of the material in the first place. Plutonium, which is the main element used in nuclear weapons, remains active for several million years. On the other hand, Uranium, the substance in nuclear power stations such as the Chernobyl plant, survives and remains dangerous for several thousand years.

● What levels of radioactivity are considered safe for human beings?

A: Obviously there are safe levels. Every time you have an X-Ray you are subjected to a certain amount of radiation. Levels of radiation are measured in relation to the amount of damage they can cause to living things. A variety of methods are used to determine the amount of damage which a given level of radiation will cause. The unit of measurement is called the Sievert. The absolute maximum dose which is considered safe is 50 thousandths of a Sievert — and this is applied only to workers in nuclear power plants. For the general public, however, the maximum level is only 5/100,000ths of a Sievert.

● What was the peak radiation measurement in Ireland

after the Soviet disaster?

A: It was recorded as 1.5 thousandths of a Sievert. This is less than half of the maximum permitted dose for the public at large and, accordingly, did not cause any health hazard.

● What are the advantages of nuclear power?

A: Particularly in an era of high energy costs, nuclear power provides cheap and plentiful electricity. Apart from considerable expenditure on safety precautions a nuclear power plant in operation essentially requires only a regular water supply to keep functioning.

● What are the disadvantages?

A: The overwhelming disadvantage is the danger of a radioactive leak to health and the environment. One of the key factors in the current nuclear debate is the danger of cost cutting on safety measures by the authorities. It has been suggested that the main reason for the Chernobyl disaster was a lack of expenditure by the Russians on the structure surrounding the centre of the plant, designed to prevent any radiation leak. This safety measure is the so-called 'containment' factor.

Another disadvantage is the problem of disposing of waste pro-

associated with dangerous levels of radioactivity?

A: After exposure to those doses of radiation which pose a health risk people may develop a number of diseases. Within two to three years of exposure there is a high risk of developing leukaemia, a lethal disease of the bone marrow. After 10 years there is a risk of cancer of the thyroid gland, while after as much as 20 years other forms of cancer may occur. Exposure to radioactivity may cause birth defects and, in large doses, infertility in both men and women.

● Apart from nuclear power plants, where else are radioactive materials used?

A: Radioactive materials have an important part to play in medicine. Many of these materials are manufactured in nuclear power plants—one of the very positive aspects of the industry. They are used in the treatment of malignant growths in the human body and in certain diagnostic procedures.

Radioactive materials also have a role to play in certain areas of industry, such as precision engineering.

● What causes the normal levels of radioactivity we have in the

By Tom Doorley

ducts from nuclear plants. Some of these materials will remain dangerous for many centuries. Another disadvantage is the ultimate nightmare of a terrorist attack on a nuclear installation.

● What is the life span of a nuclear power plant?

A: Nuclear reactors have a life span of about 30 years. After that time they become increasingly dangerous and must be closed down. Due to the fact that the older nuclear plants were built more than 25 years ago, it is only a matter of time before they reach the end of their useful lives.

Closing down a nuclear plant is not an easy matter—it cannot just be turned off. The buildings will remain dangerously radioactive and decontamination is an expensive and highly complex business. In cases where leaks have occurred during the lifetime of the nuclear reactor the decontamination process is rendered virtually impossible.

● What are the health risks

atmosphere and do they pose a threat to health?

A: This kind of radiation comes from a number of sources. The earth itself, along with rocks, minerals and gases give off very low levels of radioactivity. This so-called 'background' radioactivity is perfectly harmless and has a role to play in the function of the universe.

● Does Ireland use any native produced nuclear energy?

A: No, we do not use nuclear energy for the production of electricity. The suggestion that we build a nuclear reactor at Carnsore Point was rejected quite firmly a number of years ago and it seems most unlikely that we will become involved in the nuclear industry.

● Are there any links between nuclear power and nuclear weapons?

A: In theory, at least, yes. When nuclear fuel is reprocessed, one of the by-products is plutonium which can be used in the manufacture of nuclear warheads. The Sellafield

Plant in Cumbria produces a certain amount of plutonium in the course of its reprocessing work but it is claimed that none of it finds its way into the nuclear arsenal. Obviously strict monitoring of plutonium production is vital.

● Nuclear waste is a growing problem. Are there any signs of further escalation in its production?

A: Yes. At the moment, the worldwide nuclear industry produces a total of roughly 3,500 tonnes of waste a year. As older power stations are closed down over the next few years it is estimated that this figure will leap to a frightening 75,000 tonnes of highly dangerous radioactive waste.

● Is there scope for the deployment of further safety measures in the nuclear industry?

A: No nuclear installation can be one hundred per cent safe. The same criticism can be made of any number of industrial plants, but the lethal nature of high level radioactivity means that safety precautions are — literally — vital. Research into ways of containing nuclear waste for long-term storage and into safer reactor designs consumes a great deal of the industry's budget. Critics persist in claiming that the nuclear industry itself will never be acceptably safe.

● How dependent is Britain on nuclear energy?

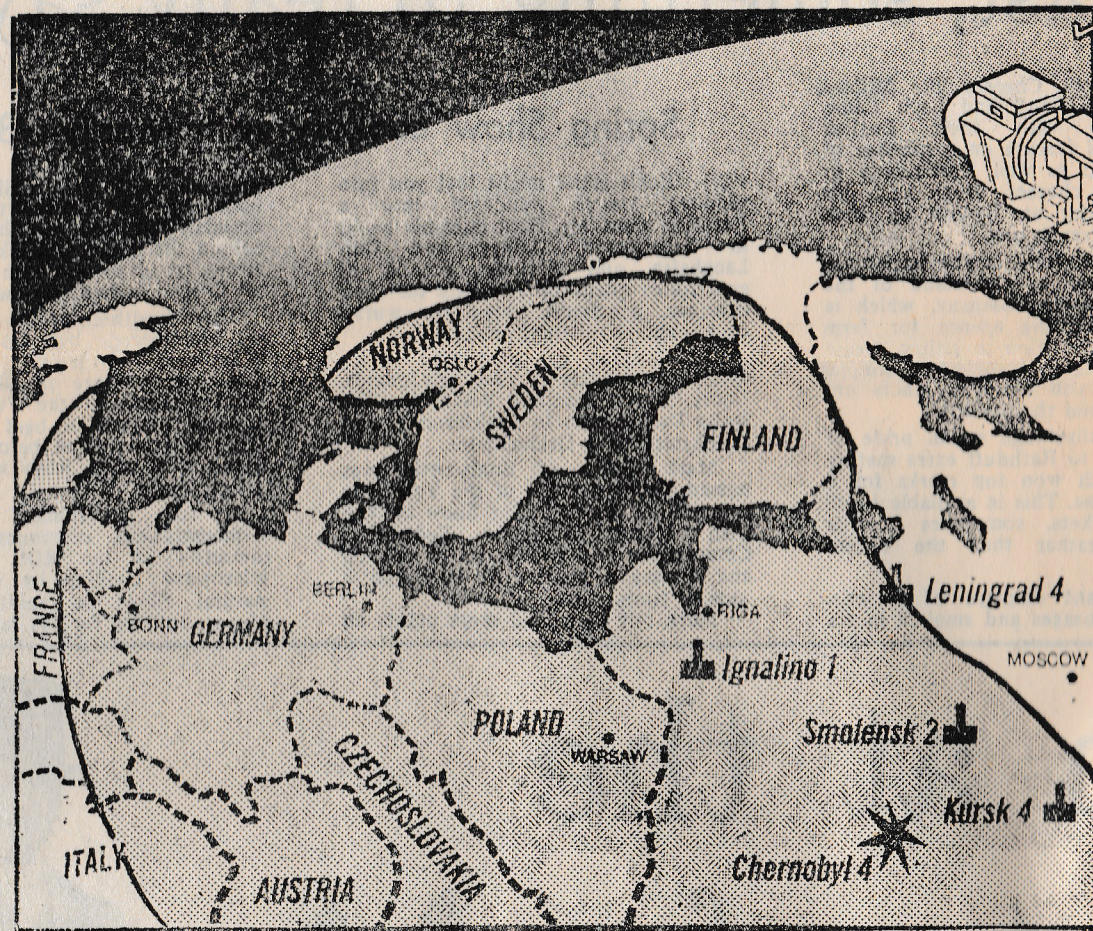
A: Britain pioneered the use of nuclear energy for the production of electricity. They took the lead from American research scientists and opened the first nuclear power plant at Calder Hall, Cheshire, in 1953. Since then they have invested heavily in the industry and now rely for almost 90 p.c. of their electricity on nuclear installations. There is a very high degree of public awareness of the dangers of nuclear power amongst the British and this, perhaps, explains their good record in terms of safety in their nuclear generating plants.

● Is there a nuclear watchdog here in Ireland?

A: The Irish Nuclear Energy Board, despite its name, is not involved in establishing an Irish nuclear energy plant. The Board's role is to monitor and supervise the management of areas where radioactive material is used — mainly in medicine, industry and the universities. They also keep a check on general background radiation and monitor the activities of our nuclear neighbours in so far as they effect us in Ireland.

NEWS ANALYSIS

All you ever wanted to know about nuclear energy



❶ The pall of radioactivity which hangs over Eastern and Central Europe in the wake of the Russian disaster.

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DISASTER AT CHERNOBYL

Health fears as fallout hits Europe

FALLOUT from the Soviet Union's nuclear disaster reinforced world political concern and health fears yesterday as winds blew radioactive debris towards southern Europe.

President Reagan, in Bali en route to a Western summit in Tokyo, called on Russia to provide more details of the Chernobyl reactor explosion.

The Soviet Union, maintaining that only two people died and denying Western reports of thousands killed, said 18 people were seriously ill among 197 initially sent to hospital after what Western experts call the world's worst nuclear catastrophe.

The Kremlin statement reported that radiation levels at the site were dropping and that no foreigners had been affected.

But anger mounted in non-communist countries over the Soviet delay in reporting the weekend accident until radioactive particles descended over Scandinavia on Monday.

The Kremlin, meanwhile, told the Vienna-based international Atomic Energy Agency that nuclear fallout was no longer taking place at Chernobyl.

"Work is under way to clean polluted sections of the adjoining locality," the Soviet mission said.

At the same time, Soviet diplomats in Oslo told the Norwegian government that their country had enough scientific expertise to deal with the accident and needed no help from the west.

Swedish experts, the first to report a deadly cloud spreading over Soviet borders, said that if any radiation was still leaking it was being blown towards Yugoslavia, Italy and Greece.

Radiation levels rose in Switzerland and Romania but fell in Sweden. In Norway, health authorities advised people in the east of the country not to drink rainwater.

In Moscow, tests on two British teachers working in cities close to Chernobyl showed higher than normal radiation — but not at a dangerous level.

Nevertheless, Britain advised its travelling nationals to steer clear of Moscow and Warsaw, western parts of the Soviet Union and northeast Poland.

Eighty-five Western students were given a health check by

the Soviet authorities but were declared fit to fly home.

Aircraft arriving at London's Heathrow Airport from Moscow were checked for radiation levels before passengers disembarked.

U.S. Secretary of State, George Shultz, accompanying Mr. Reagan on the trip to Tokyo, said Moscow had failed to live up to its international obligation to notify other countries that might be affected by a nuclear mishap.

Denmark followed Sweden yesterday and placed an immediate ban on imports of food from Eastern Europe because of possible radiation risks after the Soviet nuclear accident.

In Hamburg, the West German newspaper Bild quoted

the Soviet ambassador to Bonn as saying the Chernobyl explosion occurred on Saturday, marking the first official confirmation of the date of the blast.

U.S. intelligence sources in Washington had said they believed a "major problem" at the reactor began last Friday and that it evolved on Saturday into a meltdown of the reactor's core.

The Soviet ambassador to West Germany, Yuli Kvitsinsky also confirmed for the first time that an explosion had occurred at Chernobyl.

Photographs taken early yesterday from a French commercial satellite spot indicate that the fire in the Chernobyl reactor is out, Swedish scientists said.

Thatcher in aid pledge

THE BRITISH prime minister Mrs. Thatcher, yesterday underlined her confidence in the safety of Britain's nuclear industry and rejected a Commons call for a reappraisal of the proposed new Sizewell reactor following the Soviet disaster.

Facing a barrage of hostile Opposition questions on the future of the nation's nuclear programme, Mrs. Thatcher praised the industry's safety record as "second to none."

But she pledged the Government to a vigorous campaign to raise international standards of nuclear safety following the crisis at the Chernobyl power plant.

She promised a Tory backbencher a speedy and sympathetic response to any requests for emergency aid to fallout victims in Poland.

SDLP leader Dr. David Owen urged her to allow Sir Frank Layfield — currently preparing the public inquiry report into plans for a new nuclear plant at Sizewell, Suffolk — to "take full account

of the disaster that has happened in the Soviet Union."

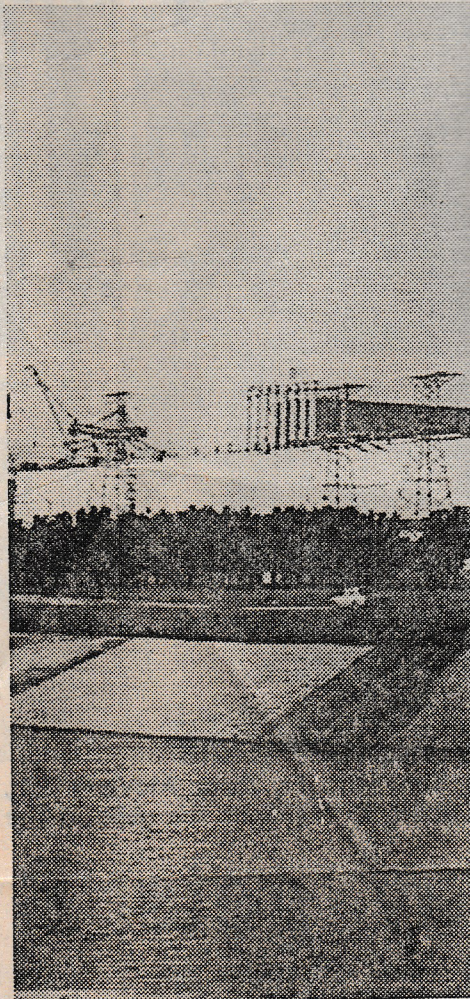
Replying to a call to meet any appeal for aid to Polish radioactivity victims without conditions, she assured the Commons: "If any requests do come, of course we shall look at them, with the greatest sympathy and do our level best to get help there as soon as possible."

The Soviet Union had not so far taken up Britain's offer of technical help to deal with the crisis, she added.

She agreed that co-operation by the Soviet Union in disclosing details of the disaster was essential to build confidence in verification of nuclear disarmament agreements.

The difficulty of getting information about Chernobyl out of Russia "should make us wary that in any arms control negotiation we must be absolutely meticulous to get specific, practical-strict verification of any agreement."

She hoped that the Russians would give full details to the



DISASTER PLANT . . . an over



Mrs. Thatcher

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Meanwhile, the chairman of the Central Electricity Generating Board said yesterday that the probable meltdown at the Russian nuclear power station could not happen in Britain.

He was sceptical of radiation fears, however, saying that if the radiation levels in Sweden were 10 times above normal, and remained at that level for a week, a member of the public would on average suffer a health hazard equivalent to smoking two cigarettes in a lifetime.

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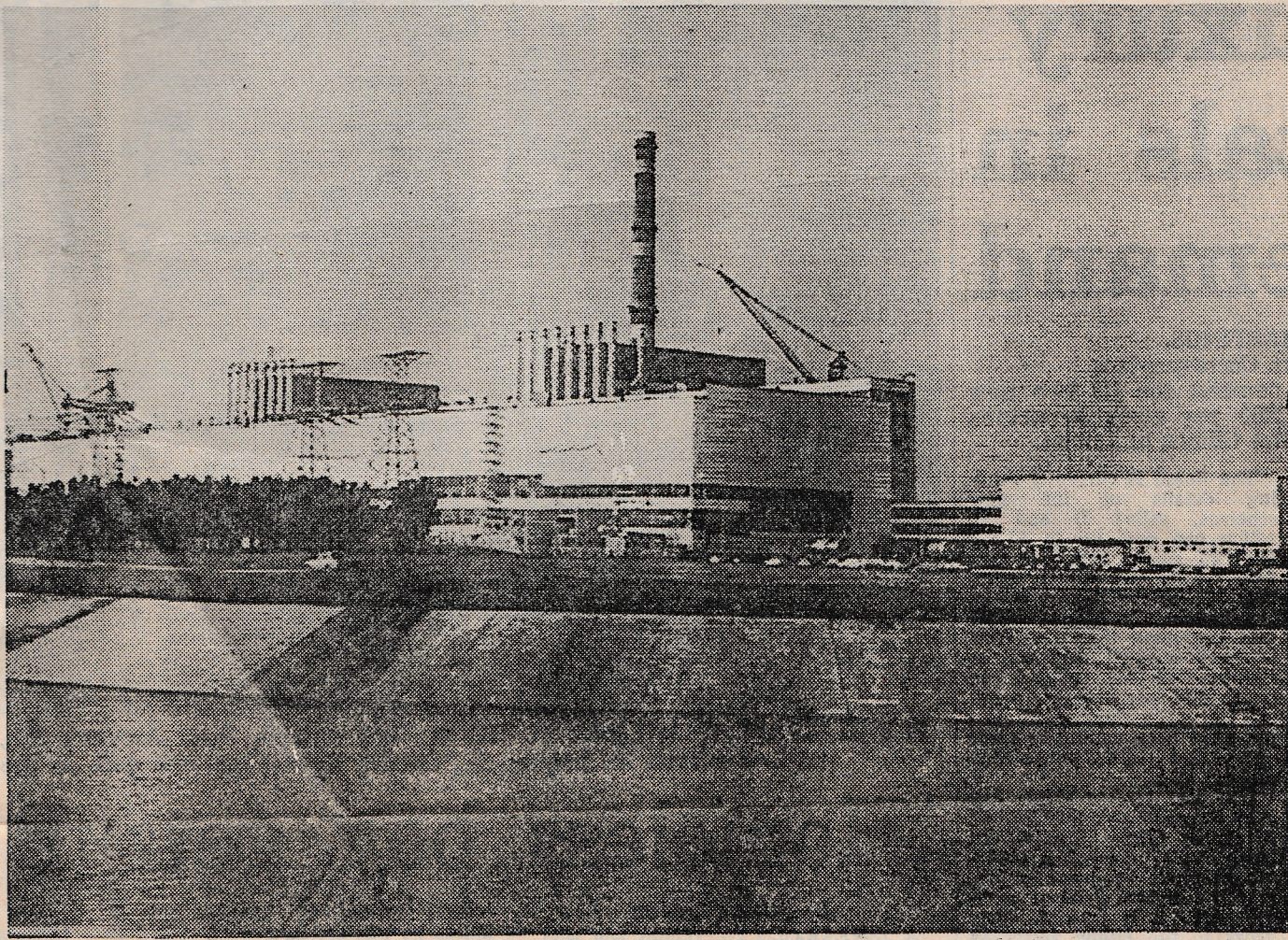
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DISASTER PLANT . . . an overall view of the Chernobyl nuclear reactor plant, where the accident happened.

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Sellafield 'more risky'

By PAM McKAY

A NUCLEAR disaster on the
scale of the radioactive leak
from the reactor at the station
in Chernobyl, could occur in
Sellafield, according to a TCD
professor.

Dr. Ian Blackith, associate
professor of Zoology, explained
that although the reactor in
Sellafield had an extra layer
to stop radiation from escap-
ing, which the Soviet reactor
did not have, there was an
even greater danger of a fire
occurring in the cooling tanks
at Sellafield.

The reactors in Sellafield
were older than those in use
in Chernobyl, and the chances
of a fire breaking out in the
cooling tanks of the reprocess-
ing plant there were greater
than the possibilities of a fire
in the Sellafield reactors. It
would be almost impossible to
put out a fire in the cooling
tanks, which would go alight
if they were allowed to burn
dry.

Dr. Blackith said that he
had little confidence in the
Sellafield managements ability
to maintain the reactor prop-
erly. He said that containment
layer would mean that only
gaseous radiation would leak,

in the event of a fire in the
reactor, but that radioactive
particles could get out with
the gas, through the dummy,
if fail-safe devices were not
properly maintained.

In an accident which hap-
pened a few weeks ago at a
nuclear station in Trallsfyndd

in Wales, the failsafe equip-
ment in the chimney where
the gas would escape, was
found to be out of order.

"I have so little confidence
left in the professional compe-
tence of the management at
Sellafield, that I am not
happy with anything they do,"
he said.

Limerick woman in call from Kiev

By BRIAN McLOUGHLIN
in Limerick.

THE widowed mother of a
Limerick woman caught in the
nuclear reactor blast in Kiev
said yesterday that she didn't
get excited when she heard
about the explosion.

Mrs. Elsie Kavanagh, who
lives in Henry Street, Limer-
ick, said that she knew that
her 36-year-old Fidelma, was
in Kiev and "I prayed and
trusted in God and I was
never really worried."

Her daughter rang her and
her only concern seemed to be
the cost of the phone call.
She told her mother that she
was alright and there was no

need to worry, and that the
Soviet authorities were making
arrangements to take her and
British students to Moscow.

Fidelma, who is married to
a Dublin-born economist,
James O'Leary, is in the
Soviet Union as part of a cul-
tural Study group from Guild-
ford University, Surrey, where
she is a first year student of
languages and culture.

Her mother said that when
she was on the phone, "I
asked her if the call was
expensive and she said it was
costing her a bomb."

Fidelma is expected home
this weekend to be reunited
with her husband in Brighton,
where they live.

TODAY'S WEATHER

Sunny spells in morning.
Cloudy and showery in afternoon. Max. temps. 11 to 15
C. (52 to 59 F.)

(See Page 23).

Irish Independence

Vol. 95. No. 107

Wednesday, May 7, 1986

Price 50p (45p Stg. in N.

Radiation here 23 times the normal level, N

RADIATION levels here increased to 23 times the normal level on Saturday last, the Nuclear Energy Board admitted in a formal statement last night.

The announcement of the latest official figures came almost at the same time as Tanaiste and Energy Minister Dick Spring maintained, in a television interview, that levels of radioactivity reached only twice the normal amount over the weekend.

The latest NEB statement also appeared to be at variance with the initial announcement by Mr. Spring on Sunday evening that a "slight increase" in radioactivity had been detected on the east coast at 6 o'clock on the same evening.

It was also admitted yesterday, by a

Dublin-based nuclear scientist, that significantly higher levels of radioactive contamination had been found in milk supplies taken in this country since Monday.

Dr. Peter Mitchell of UCD, who was called in to assist the Nuclear Energy Board in examining milk, said one sample on Monday morning revealed levels of radiation "very much higher than before".

Such measurements "could give cause for concern" if they continued, although he added, "I wouldn't like to suggest that we are alarmed by these levels, but somewhat concerned".

Dr. Mitchell said that the amount of radioactive iodine found was in the order

By WILLIAM DILLON

of 400 units per litre. This was about one-quarter of the threshold level in Britain at which there might possibly be a recommendation that young children should not take milk.

In its statement last night, the NEB said that air samples taken in the Dublin area normally showed background radioactivity of less than 10 becquerels per cubic metre.

This figure had increased to 236 becquerels per cubic metre on Saturday, falling to 171 becquerels on Sunday and

2.6 becquerels on Monday. "It would appear there fore that the peak of activity has passed".

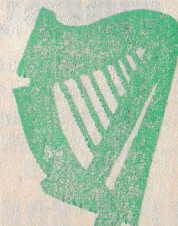
Milk samples which would normally show an iodine-131 activity of less than 10 becquerels per litre had increased to 67 becquerels pr litre on Sunday, May 4 and had reached 440 becquerels per litre the following day. "Indications so far are that the May 6 readings are lower".

The board continued: "It is considered that these levels do not constitute a significant health hazard".

A Department of Energy spokeswoman explained the apparent change by the day on which the first fall-out was found in this

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The board continued: "It is considered that these levels do not constitute a significant health hazard".

A Department of Energy spokeswoman explained the apparent change by the day on which the first fall-out was found in this

country. She said radiation would have been detected on Sunday evening in samples taken the previous day.

On the question of the safety of drinking milk, Donal Murphy, general secretary of the Irish Creamery Milk Suppliers' Association, said a formal statement was necessary to clear people's minds and re-assure them.

Suppliers were worried because any doubt or query in the consumers' minds posed a threat to milk sales. Dairy farmers were also concerned that they had not been given even simple instructions on what they might do to lessen the risk to their stock and produce.

Continued on Page Two

Chernobyl is being encased in concrete

RADIATION is still leaking slowly out of the Chernobyl nuclear reactor, but Soviet experts have stopped the fire in its core and will "entomb" it in concrete to begin a years-long cooling process, international atomic energy officials said yesterday.

The officials told a news conference they cannot rule out a future meltdown in the ruined reactor, but temperatures are dropping in the core and the feared "China syndrome" is not an immediate threat.

They could not predict when the 84,000 residents evacuated from an 18-mile zone around the reactor will be able to go home.

Britain to wind down alert

THE British Government is on the verge of winding down the nuclear alert, Environment Minister Mr. William Waldegrave said yesterday.

But if the crisis in the Ukraine were to worsen with a "melt-down" of nuclear material into the earth, the Government had contingency plans available, Mr. Waldegrave said at Lancaster University.

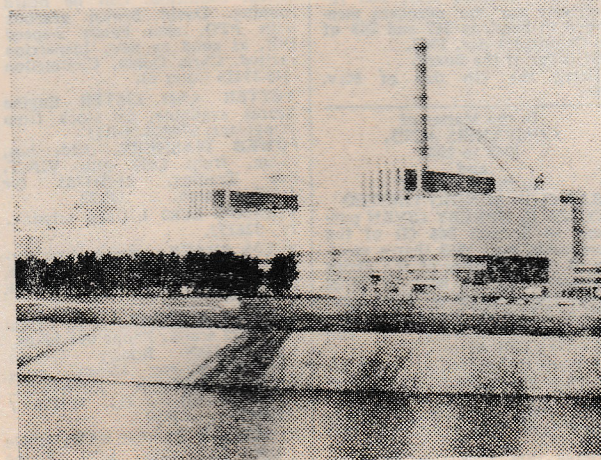
These included throwing away fresh milk, he said, although the main problem would affect water supplies in Russia.

Mr. Waldegrave, speaking to reporters during a one-day conference on Confidence in Nuclear Power, said there would now have to be a major public debate in Britain on all matters nuclear.

In London, meanwhile, a Soviet Embassy official was summoned to the Foreign Office to hear fresh complaints about his Government's handling of the disaster.

Mr. Waldegrave said the situation in Britain had improved yesterday. If there was no further action accidents, the problems from radiation would diminish almost completely over the next few days.

The Government was still advising people not to drink



● The damaged Chernobyl plant . . . now encased in concrete.

Molten core 'penetrated' plant floor

THE Chernobyl nuclear reactor core may have melted through the concrete floor of the power plant and jeopardized the ground water in the area, a West German nuclear research spokesman said yesterday.

Klaus Koerting of the Nuclear Research Centre in Karlsruhe, said they had been indirectly consulting with the Soviets on the April 26 accident through contacts in Bonn.

The spokesman, while giving considerable details about the Chernobyl ac-

East European journalists said they were told by a Soviet official the accident has killed a third person, the first to die from radiation exposure in a civilian nuclear plant accident.

Official reports have said two people were killed in the April 26 explosion and fire at the reactor and 204 were hospitalised for radiation exposure. Eighteen of those have been reported in serious condition.

The third death was not mentioned in a government statement on the accident issued last night. The three-paragraph statement, transmitted by the official news agency Tass, gave no new information.

In Kiev, the first foreign correspondents allowed to visit the Ukrainian region near Chernobyl were given a tour of a farm that took in 1,000 evacuees.

The reporters were shown how medical checks are being conducted and allowed to talk to a few evacuees, all in apparent good health.

Hans Blix, director general of the Vienna-based International Atomic Energy Agency, and two of his deputies held a news conference yesterday, after five days of meetings with Soviet officials.

Asked if he was satisfied with information the Soviets provided, Mr. Blix replied, "Emphatically, yes".

Morris Rosen, an American who is nuclear safety director for the Agency, said Soviet experts coordinating the cleanup are "competent and well-qualified" and are trying innovative solutions.

Mr. Blix, Mr. Rosen and IAEA Deputy Director Leonard Konstantinov, a Soviet, flew within a half mile of the damaged No. 4 reactor at the four-reactor complex 80 miles north of Kiev on Thursday.

Based on their own observation and Soviet data, Mr. Blix said:

"It's clear . . . that the radioactive consequences of this accident are far more serious than in any accident so far, also that

(one or two yards) thick," Mr. Koerting said. "If that's the case, then it's probably the fission process, which is self-heat generating has penetrated the concrete cellar, and into the ground."

He said West German experts were approached by the Soviets on May 7 about advice on calculating the effects of the molten mass of the core on a concrete floor.

"But the Soviets have not provided exact details on the composition of their concrete floor. They may

They could not predict when the 84,000 residents evacuated from an 18-mile zone around the reactor will be able to go home.

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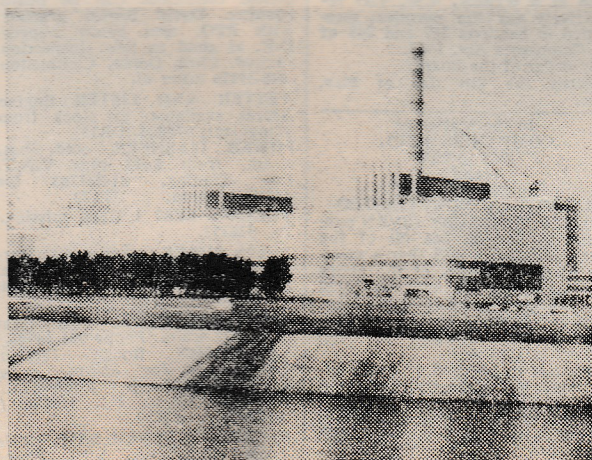
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Mr. Waldegrave said the situation in Britain had improved yesterday. If there was no further action accidents, the problems from radiation would diminish almost completely over the next few days.

The Government was still advising people not to drink fresh rainwater, however.

Mr. Harold Bolter, secretary of British Nuclear Fuels, told the Lancaster conference that Britain's own nuclear power industry was now on probation following Chernobyl.

There were no short-cuts to safety in the UK's plants, he said.



● The damaged Chernobyl plant . . . now encased in concrete.

Molten core 'penetrated' plant floor

THE Chernobyl nuclear reactor core may have melted through the concrete floor of the power plant and jeopardized the ground water in the area, a West German nuclear research spokesman said yesterday.

Klaus Koerting of the Nuclear Research Centre in Karlsruhe, said they had been indirectly consulting with the Soviets on the April 26 accident through contacts in Bonn.

The spokesman, while giving considerable details about the Chernobyl accident in a telephone interview with the Associated Press, emphasised that the centres experts have been hampered by a lack of complete disclosure by the Soviets.

"We are not sure, but we think the floor of the plant is only one or two metres

(one or two yards) thick," Mr. Koerting said. "If that's the case, then it's probably the fission process, which is self-heat generating has penetrated the concrete cellar, and into the ground."

He said West German experts were approached by the Soviets on May 7 about advice on calculating the effects of the molten mass of the core on a concrete floor.

"But the Soviets have not provided exact details on the composition of their concrete floor. They may have more limestone in their concrete", making it more vulnerable to the heat."

Koerting added that the molten mass may have reached the ground, thus endangering nearby water. He emphasised his group had not run specific tests on such a possibility.

In Kiev, the first foreign correspondents allowed to visit the Ukrainian region near Chernobyl were given a tour of a farm that took in 1,000 evacuees.

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Based on their own observation and Soviet data, Mr. Blix said:

"It's clear . . . that the radioactive consequences of this accident are far more serious than in any accident so far, also that the radioactive releases to the environment are much more serious."

But, Mr. Rosen said: "There are relatively little radioactivity releases now and the temperatures (in the damaged reactor) are decreasing. The situation appears to be stabilising."

Sweden 'safe' from radiation

SWEDEN officially said yesterday there was no longer any risk of dangerous radiation contamination reaching Sweden from the Chernobyl accident.

"The latest information is that the situation is quiet", Olof Hoermander, head of Sweden's Nuclear Inspection Board, said at a government news briefing.

"The danger of inflow of dangerous air is over", state meteorologist Raoul Iseborg said at the same briefing.

Southern Sweden was showing a slight increase in radioactivity from Chernobyl yesterday, but Mr.

Iseborg said it was from air which had passed over Chernobyl three days ago.

"From the composition of the fallout we can exclude that it is from new emissions", said Ragnar Boge, deputy head of the Swedish Radiation Protection Board.

Sweden on April 28 became the first country to publicly disclose that it had found foreign fallout on its territory. It had received more than any other Nordic country.

Finnish doctors complained yesterday about what they said was a lack of information from the In-

terior Ministry and their own medical board in the aftermath of the Chernobyl accident.

They said that in the nearly two weeks since the radiation was discovered, they had not received any advice about what to tell Finns who called about risks or health problems.

Johan Baarli, director of Norway's State Institute for Radiation Hygiene, said that radiation levels had declined to 5 per cent of what they were on April 28.

In Denmark, levels were still up slightly because of radiation concentrated by heavy rains.

Submarine accidents

News reports of accidents involving two American nuclear submarines last week have led to a call by British Labour Defence Spokesman, Mr. Martin O'Neill, for an immediate statement by the British Government on the resumption of parliament in London. The reports alleged that in one case a submarine ran aground in the Irish Sea, and that in another instance one of the boats involved in the Libyan escapade suffered damage to its hull and had to limp into Gibraltar.

DISASTER AT CHERNOBYL

Ireland safe from fallout

By DAMIEN McHUGH

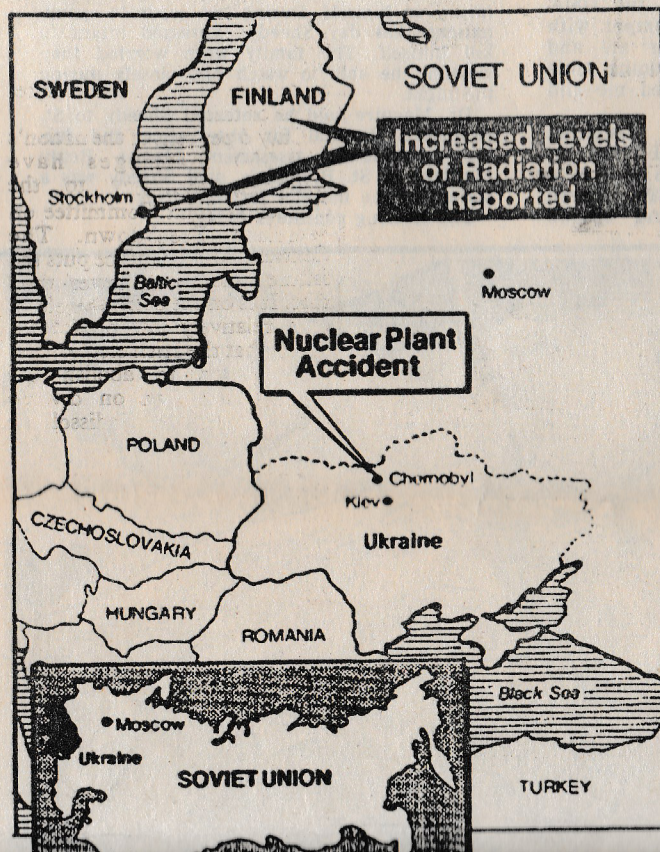
THERE seemed little immediate danger to Ireland yesterday from the core meltdown — known as the China Syndrome — at the Soviet nuclear plant near Kiev, after a wind shift blew the radiation back towards Russia.

However, Earthwatch, the Irish environmental group, warned that the effects of the disaster would add to those from the nuclear disaster at Windscale (now Sellafield) in 1957 and the atmospheric nuclear bomb-testing in the same decade.

"That radiation is not going to disappear overnight", said the group's publicity director, Mary O'Donnell. "it will be distributed into the atmosphere and will add to the burden we are already carrying".

Earthwatch, which is an associated member of Friends of the Earth International and is closely linked with Greenpeace, said that the lesson to be learned from this most recent nuclear disaster was the complete closure of Sellafield.

Ms O'Donnell said Ireland could not be complacent about fallout, pointing to the fact that iodine, one of the elements thought to exist in the Soviet radiation, which had also been an element in the Sellafield radiation in 1957, tested in the thyroid causing



CHECKING . . . an expert in radiation yesterday surveyed the surroundings of the temporary radiation protection headquarters in Stockholm, Sweden.

Radiation up

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Radiation up

Britain is ready with aid—Thatcher

BRITAIN has escaped the effects of the nuclear plant disaster in the Soviet Union, MPs were assured by both the Prime Minister and Environment Secretary, Mr. Kenneth Baker, in the Commons yesterday.

Britain stands ready to offer scientific advice to the Russians if asked, MPs were also told there were demands from all sides for a full report from the Soviets of details of the disaster. Energy Secretary, Mr. Peter Walker, has already asked the Russians for "the fullest information" on the incident.

Mrs. Thatcher told MPs: "We are not in a position to make a full assessment, but there have been no increases in radioactivity in this country that we have been able to detect".

She repeatedly praised British safety standards, and declared: "the record of our own nuclear industry is absolutely superb".

Mrs. Thatcher added: "If there are accidents overseas of the kind we have seen in the Soviet Union, they should be reported to the International Atomic Energy Agency so the lessons can be learned universally".

She told the House: "We have not received, as far as I am aware, any request for help, which is perhaps not surprising under all the circumstances".

SDP president, Mrs. Shirley Williams, who visited the Sellafield nuclear reprocessing plant yesterday said there was a strong case for an international code of practice to ensure safety standards at all nuclear plants.

"There should be a greater transfer of information between countries on safety measures and there should be international emergency procedures to enable experience and expertise from all countries to be co-ordinated at the time of crisis. Neighbouring countries should have been told about the accident immediately and their advice sought on the best way the problem could be contained."

Replying to Britain's Shadow Environment Secretary, Dr. John Cunningham, Mr. Baker said the Government still lacked information on the accident, but he told MPs: "It is clear that there may have been significant casualties".

Reinforcing the Prime Minister's earlier assurances on radioactivity levels in Britain, he said: "Present evidence suggests that there is no danger to the UK, but the situation will continue to be

the atmospheric nuclear bomb-testing in the same decade.

"That radiation is not going to disappear overnight", said the group's publicity director, Mary O'Donnell. "it will be distributed into the atmosphere and will add to the burden we are already carrying".

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Ms O'Donnell said Ireland could not be complacent about fallout, pointing to the fact that iodine, one of the elements thought to exist in the Soviet radiation, which had also been an element in the Sellafield radiation in 1957, lodged in the thyroid, causing cancer of the gland. While the condition was not fatal, the victims would need synthetic treatment for the rest of their lives.

"The Sellafield effects from the late 1970s disaster are still being felt," Ms O'Donnell told the IRISH PRESS. "It is only in recent years that the British authorities admitted that plutonium, another radiation element, was released and this is serious for health. The effects of that disaster will be felt for 1,000 years".

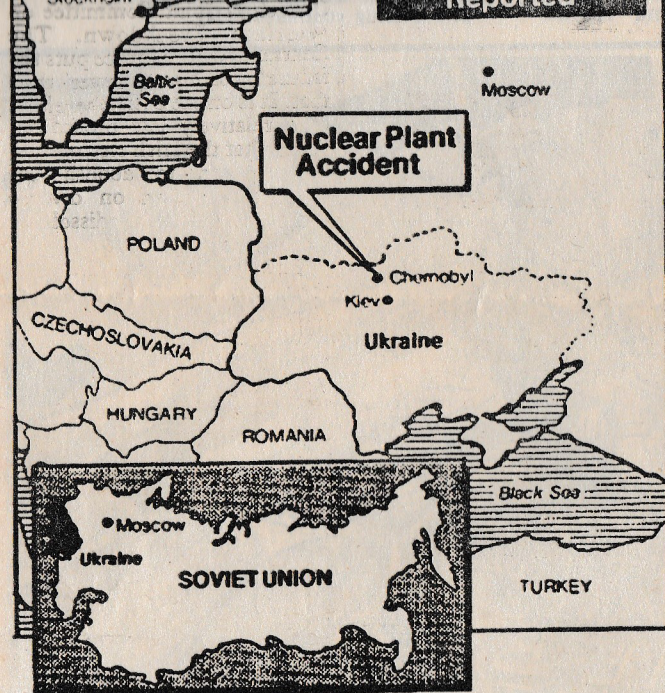
The group agreed with the remarks of Dr. Pat Coll, of the Irish Doctors Against Nuclear War, that there was no such thing as a safe level of radiation. Any increase was too much.

Talks with Soviets

IN A first reaction to reports of large-scale nuclear pollution from the power plant, a number of European parliamentarians have urged the EEC to get in touch with Moscow as soon as possible.

Mr. Alf Lomass, leader of Labour's 32 Euro-MPs, stressed yesterday that "pollution crosses borders and must be dealt with at an international level". He added that the European Commission must open immediate talks with the Soviet Union. In order to improve their own safety it was essential for EEC countries to learn from what went wrong.

Another socialist MP and Vice-Chairman of the Environment Committee, Ken Collins, said that the Soviets must be compelled to provide us with all the information available.



The Irish Nuclear Energy Board, which monitors the air in conjunction with the Met Office, said yesterday that the effects of the Soviet accident, the extent of which was still unclear, were unlikely to be detrimental to Ireland. However, it said it would continue to monitor the situation and keep developments under review.

Mr. John Cunningham of the Nuclear Energy Board, said that samples were collected in the west over a 24-hour period. They were then brought to Dublin where they were analysed during the following 24 hours.

Meanwhile, the European

Commission has contacted member states requesting up-to-date information on radioactivity levels, which will be used to trace the evolution of radioactivity since Saturday last, when the accident is believed to have occurred.

One of the EEC's selection committees known as the Article 31 Group, which will meet on May 22 and 23, will have the matter on its agenda.

Yesterday EEC Commissioner Clinton Davis, who has just had talks with the Tanaiste and Minister for Energy, Mr. Spring, at a day-long meeting, accused the Soviets of a breach of international law because of their failure to release immediate information about the nuclear disaster, which occurred 100 miles from Kiev.

Speaking in Dublin, Mr. Clinton Davis, the Environmental Commissioner, said: "Openness, frankness and the provision of information at an early date is absolutely essential in a case like this".

He said the Commission was considering the Irish Government's request of a European inspection force to oversee the safety of nuclear plants within the EEC. The matter was currently being discussed by a committee of experts.



CHECKING . . . an expert in radiation yesterday surveyed the surroundings of the temporary radiation protection headquarters in Stockholm, Sweden.

Radiation up 100 times

RADIATION levels 100 times above normal were recorded after rain and snow, impregnated with radioactive debris from a Soviet nuclear accident, fell on the east coast of Sweden yesterday.

A spokesman from Sweden's National Radiological Institute said atmospheric radiation from the damaged reactor was falling but that radioactivity in rain and snow had soared.

The Swedish Government said the fallout did not pose a health risk because it had occurred so far away and defence experts said radiation levels would have to be 10,000 times higher to be dangerous.

Sweden, along with other western countries, is pressing Moscow to say exactly what happened at the Ukrainian plant. The Soviet news agency Tass said one of the reactors had been damaged and that there had been some casualties, but gave no details.

The Swedish Radiological Institute said it would be unsafe to go within 60 miles of the reactor, 30 miles north of Kiev. Some 3.5m people live in the Kiev area.

The way the Soviet Union handled the accident has angered its Scandinavian neighbours. Initial Swedish inquiries

about a nuclear leak were on Monday met with Soviet denials.

Danish Prime Minister, Mr. Poul Schluter, told a news conference yesterday: "The Government takes the view that it is quite unacceptable that the Soviet Union did not unhesitatingly inform other countries about the accident".

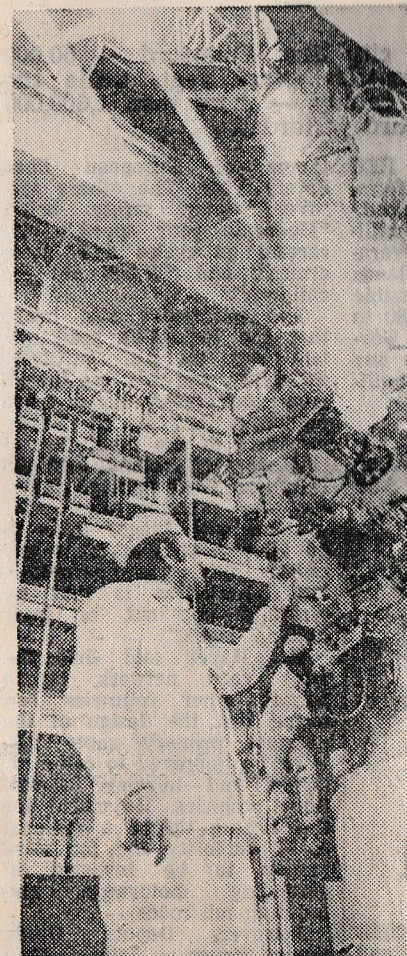
In Copenhagen, several chemists shops sold out their stocks of iodine tablets, a classic cure to combat the effects of radiation.

The US, meanwhile, offered the Soviets humanitarian and technical aid to deal with the accident.

The offer was made by assistant secretary of state, Mr. Rozanne Ridgeway, at a State Department meeting with Mr. Oleg Sokolov, the senior Soviet diplomat in Washington.

Experts say the burning Soviet reactor seems to be similar to the 1957 fire at Britain's Windscale plant (now Sellafield).

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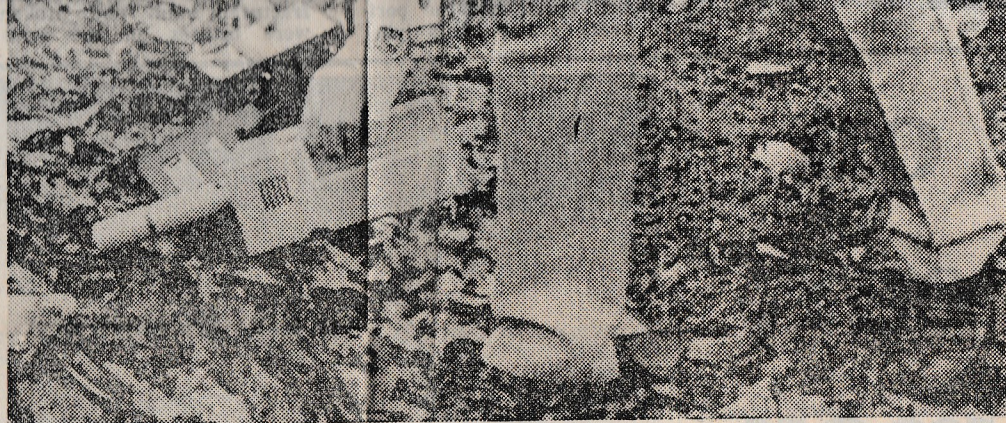
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make a full assessment, but there have been no increases in radioactivity in this country that we have been able to detect".

She repeatedly praised British safety standards, and declared: "the record of our own nuclear industry is absolutely superb".

Mrs. Thatcher added: "If there are accidents overseas of the kind we have seen in the Soviet Union, they should be reported to the International Atomic Energy Agency so the lessons can be learned universally".

She told the House: "We have not received, as far as I am aware, any request for help, which is perhaps not surprising under all the circumstances".

on safety measures and there should be international emergency procedures to enable experience and expertise from all countries to be co-ordinated at the time of crisis. Neighbouring countries should have been told about the accident immediately and their advice sought on the best way the problem could be contained."

Replying to Britain's Shadow Environment Secretary, Dr. John Cunningham, Mr. Baker said the Government still lacked information on the accident, but he told MPs: "It is clear that there may have been significant casualties".

Reinforcing the Prime Minister's earlier assurances on radioactivity levels in Britain, he said: "Present evidence suggests that there is no danger to the UK, but the situation will continue to be monitored carefully".

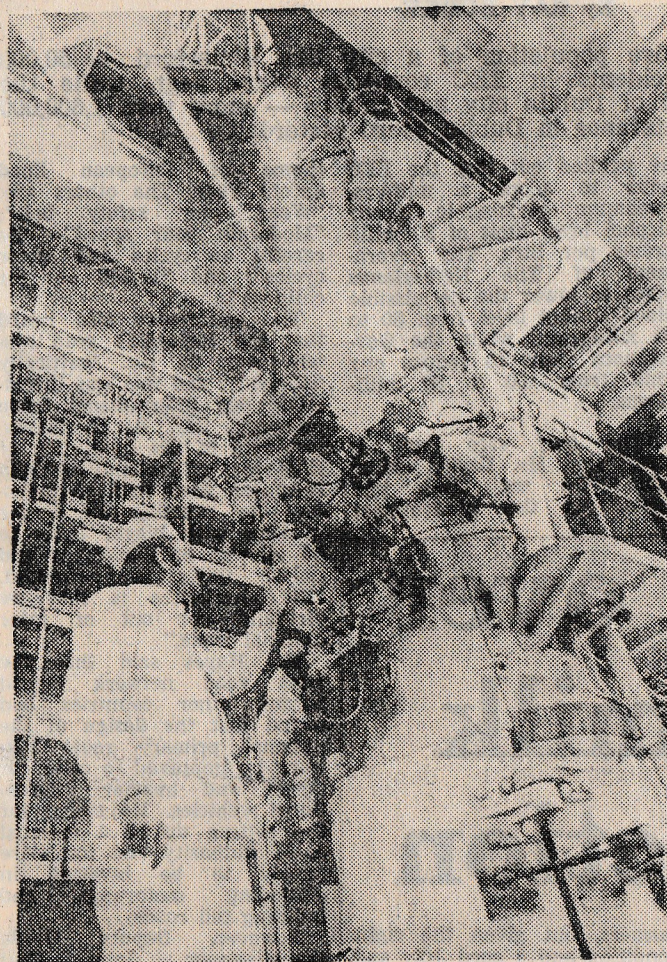
Mr. Baker told Dr. Cunningham that extensive radioactivity monitoring was being carried out by the National Radiological Protection Board in Oxford and Glasgow, using gamma monitors.

Plant 'a model of safety'

The Chernobyl nuclear power plant was hailed by an official magazine Soviet Life in February as being a model of safety. An eight-page article in its US edition described the plant and its four reactors as being totally safe.

The article said: "The huge reactor is housed in a concrete silo, and it has environmental protection systems. Even if the incredible should happen, the automatic control and safety systems would shut down the reactor in a matter of minutes".

It also quoted Vitali Sklydov, the Ukraine's Minister of Power and Electrification, as saying there was no danger having towns next to the plant.



ONE of the four nuclear plants at Chanobyl. They were described by a Soviet magazine as "absolutely safe".

Worldwide

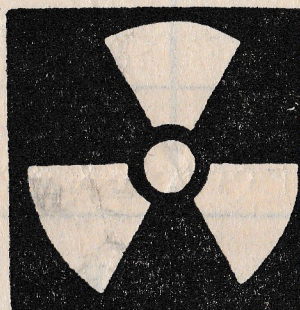
Chernobyl nuclear plant—a reactor just waiting for disaster

Meltdown explodes the myths

WESTERN experts were quick last week to say that the Chernobyl disaster could not happen here. But, as scientists piece the evidence together of what actually happened, it is clear that there are disturbing lessons for the world's nuclear industries.

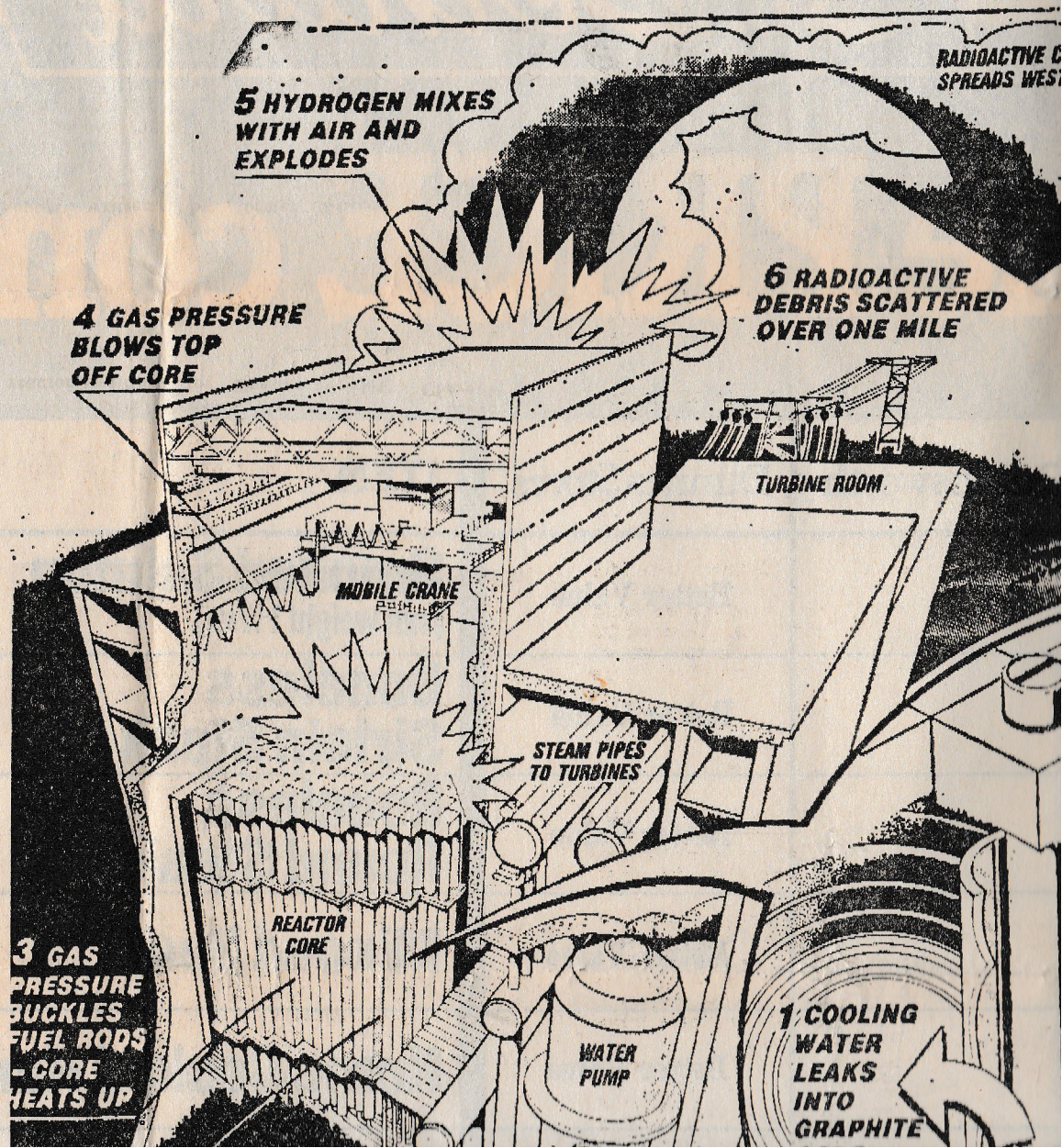
IT WAS an accident that made a mockery of the confident predictions of the nuclear industry — Russian, American and British.

Discussing the Chernobyl plant in June, 1983, Mr. B. A. Semenov, the Russian head of the Department of Nuclear Energy and Safety at the International Atomic Energy Agency, said: "A serious loss-of-coolant



Report by Geoffrey Lean and Robin McKie

—the most recently installed of four one-thousand megawatt reactors. The first thought of the plant control management was to prevent the fire spreading to the other three reactors. Two of these, numbers one and two, had no heavy concrete shielding. If the fire were to put the cooling systems out of action with its overheated graphite rods still in their working position, the consequences would be catastrophic.



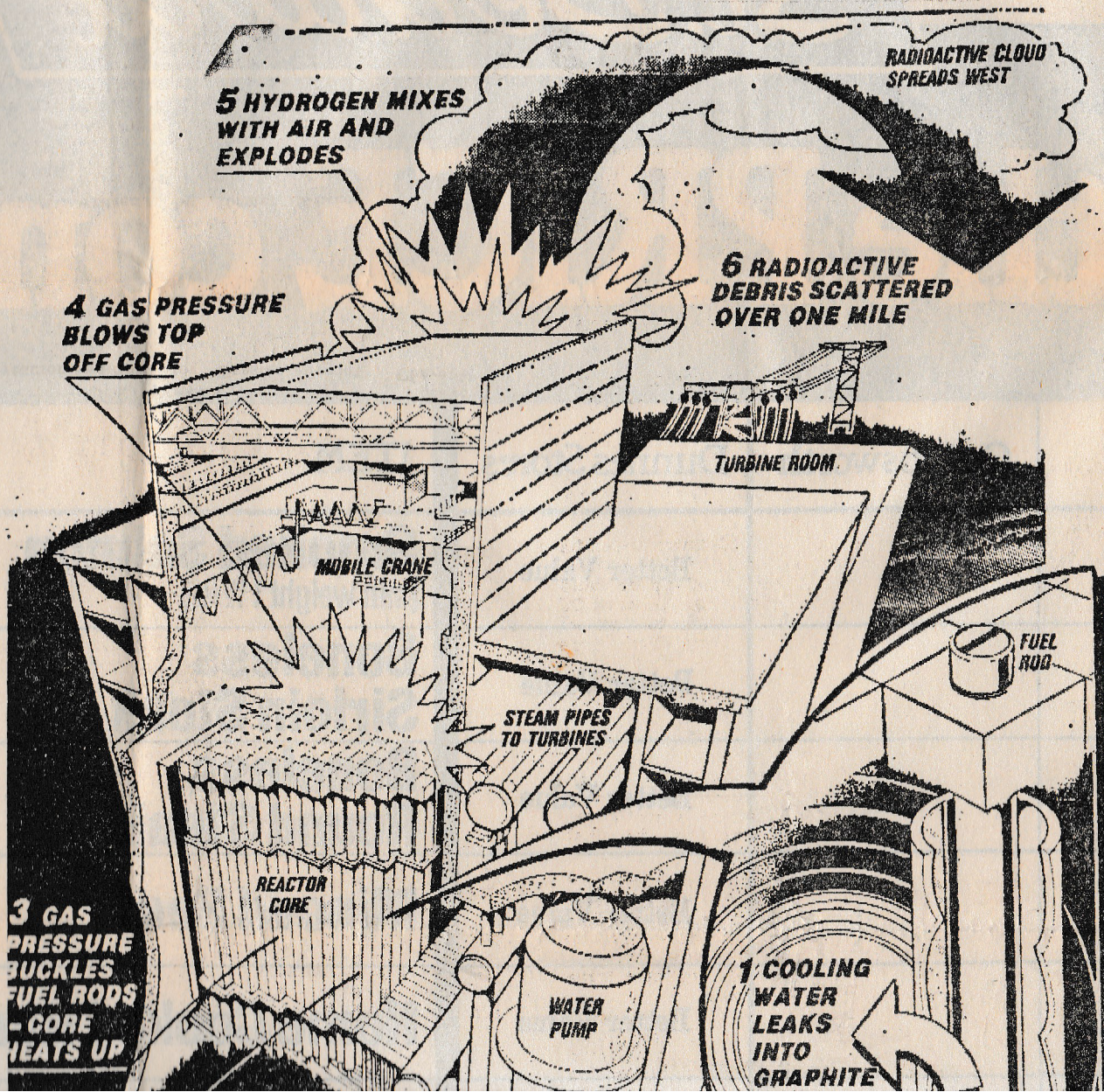
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'Interrogator' claim on Dr. Waldheim

A NEW twist appeared in the controversy surrounding former UN Secretary General Dr Kurt Waldheim — who may become Austria's president today — when a senior British Labour MP claimed to have evidence that Dr Waldheim interrogated British prisoners of war in 1943.

Mr. Greville Janner, a member of the executive of the World Jewish Congress, has appealed to any survivors of the alleged interrogations at Salonika to come forward.

Mr. Janner said his information came from German Army documents captured by the Allies

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Discussing the Chernobyl plant in June, 1983, Mr. B. A. Semenov, the Russian head of the Department of Nuclear Energy and Safety at the International Atomic Energy Agency, said: "A serious loss-of-coolant accident is practically impossible".

Two months ago the US edition of the magazine Soviet Life gave a nine-page feature on Chernobyl the headline, "Total Safety", and described any idea of a melt-down as "incredible".

In 1975, a giant 10-volume study by the United States Atomic Energy Commission concluded that an accident big enough to kill 70 people would only happen once in a million years of a reactor's operation.

And amid the brandy and cigars of a lunch last week held by the British Nuclear Forum — a joint government/industry body — the audience gave loud applause to Lord Marshall, chairman of the Central Electricity Generating Board, when he said that radiation inside the Chernobyl exclusion zone would be "no worse than smoking a couple of extra cigarettes a year".

Confronted by a disaster whose true extent can still only be guessed at, western experts took refuge in castigating Russian safety standards, and applauding their own nuclear records.

● Serious lessons

But it is already clear that what happened at Chernobyl has serious lessons for the West, which is in danger of being submerged by the



Report by Geoffrey Lean and Robin McKie in London; Andrew Wilson, Moscow, and Peter Pringle in Washington.

industry's own propaganda:

● British Energy Secretary Peter Walker said last week that Russian reactors do not have "total containment", and would therefore not be permitted in the United Kingdom. This is untrue: none of the UK's Magnox reactor series have containment domes.

● The Soviet Union was accused of building reactors far too close to populated centres. In fact Britain, with its dense population, would face a far higher potential death rate in the event of a serious accident at any one of its reactors.

● Mr. Walker claimed that there had never been "emergencies involving significant radiological hazards to the public at any civil nuclear installation". This is specious: the October, 1957 Windscale fire led to at least 30 deaths. It was, however, a military installation at the time.

In Moscow, as elsewhere, the generally accepted version was that the accident had started last Sunday morning. In fact, it began at least twelve hours earlier — on Saturday, April 26.

The accident hit reactor number four at Chernobyl

— the most recently installed of four one-thousand megawatt reactors. The first thought of the plant control management was to prevent the fire spreading to the other three reactors. Two of these, numbers one and two, had no heavy concrete shielding. If the fire were to put the cooling systems out of action with its overheated graphite rods still in their working position, the consequences would be catastrophic.

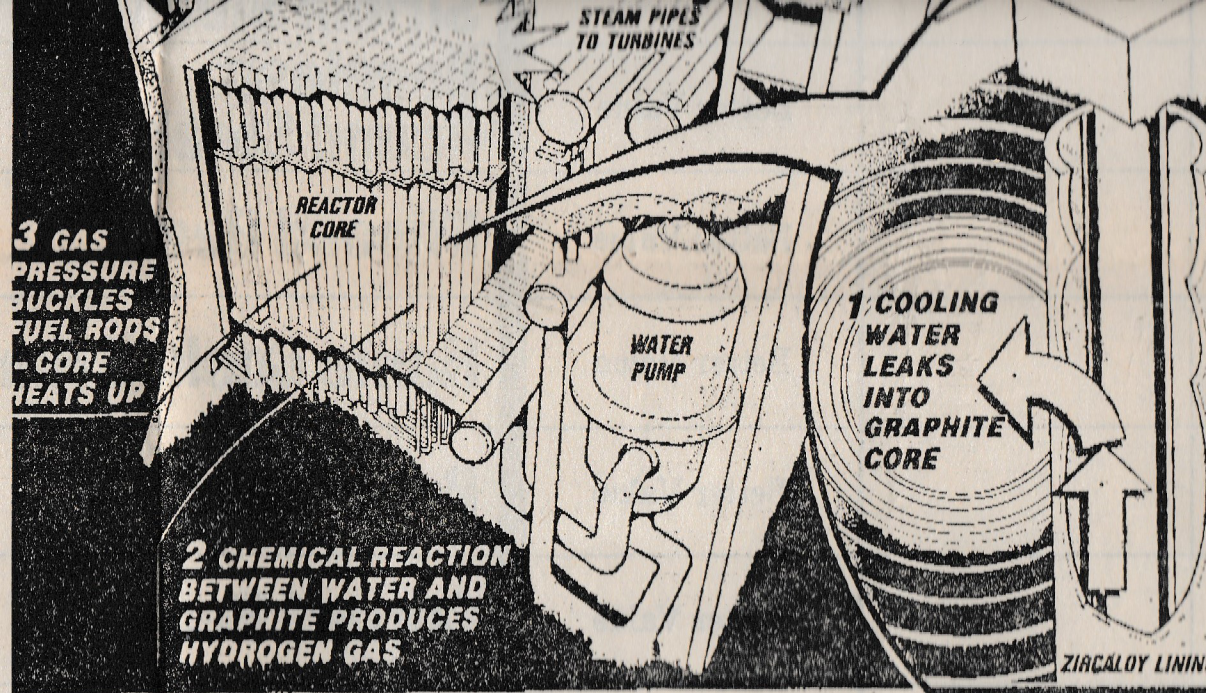
Within reach of danger were the plant's stocks of weapons grade nuclear material — plutonium. It became desperately necessary to shut down these reactors at the same time to keep their cooling system going — to put them, in the innocent-sounding phrase, "on standby".

What this meant was that teams of scientists and engineers were required to go into a zone of quite lethal radiation to operate and monitor the controls.

● Engineer heroes

To minimise the time that each had to spend there, scientists and engineers were brought in from other Soviet plants so as to set up a system of relays. Nobody knows how long each team was obliged to remain in the lethal zone, but it would seem that, without a doubt, these men were heroes of the highest order. A number of them are almost certainly among the eighteen admitted on Thursday to be in a "serious condition" in Soviet hospitals.

By the end of the week scientists were beginning to reach rough agreement in their speculations. These suggest that the Soviet Union's figure of two dead is ludicrously low, but that estimates from the United States of



The countdown to catastrophe

CHERNOBYL nuclear plant was a reactor waiting for disaster. Soviet complacency, compromise technology and poor manufacturing standards combined last week to trigger the world's worst nuclear disaster.

And British experts believe they now know how it happened. Indeed a report written by former British National Nuclear Corporation consultant Peter Potter prophetically pinpointed Russia's RBMK reactors' crucial flaws in 1978. Following a visit to Chernobyl's sister reactor at Leningrad, Mr. Potter warned that secondary containment vessels, reactor shutdown devices and emergency cooling systems were all crucially missing from RBMK reactors.

2,000, or even 20,000, fatalities are very much too high.

Experts now calculate that between ten and a hundred people will die from the acute effects of radiation within the next months and that about 1,000 people in the Soviet Union will get cancer

over the next decade as a result of being irradiated by the accident.

But these relatively low figures are based on three optimistic assumptions.

First, they are mainly calculated from the measures of radiation measured in Sweden, and these are probably only

Experts believe their absence sealed Chernobyl's fate after the initial cracking of one of dozens of alloy-clad pressure tubes that run through the reactor's core. These tubes carry cold water into the base of the reactor, channel it over the heated uranium fuel rods and bring it out at the top as pressurised hot water that is then used to run Chernobyl's turbines. ...

The crack — probably at a welded joint at the reactor's base — sent superheated steam pouring over the reactor's graphite core.

Graphite is a form of carbon which slows down neutrons in the air so they can react with uranium to produce energy. But crucially, graphite also reacts violently with steam at high temperatures — and Chernobyl opera-

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As pressure built up inside reactor, the core ceiling cracked in air which ignited the hydrogen resulting explosion blew the reactor building instantly two workers.

Chernobyl's Number 4 reactor now in a catastrophic state. A fire was raging at its heart as plant's operators could not even fuel pins from the distorted tubes.

The result was a core meltdown. Heated by their own energy, the burning graphite, the uranium simply melted. Some highly radioactive material was hurled into the air, the rest sank to the bottom reactor as super-hot slurry.

the fingerprint of the first couple of days of emissions.

Secondly, they assume that people were evacuated from the immediate area of the plant, quickly and effectively.

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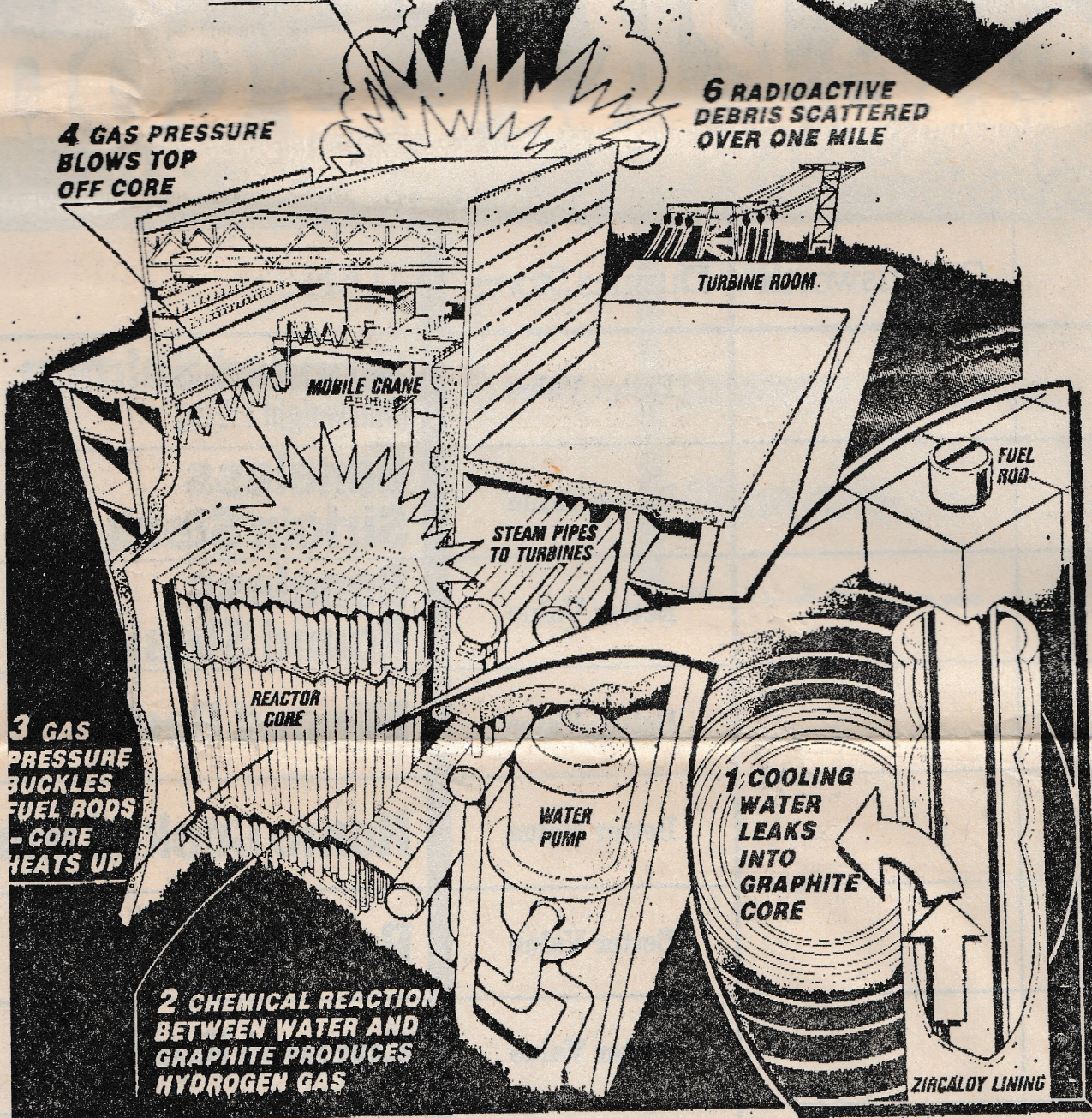
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But its proposed replacement the, the American-style PWR, is certainly not untainted either. It was a PWR which approached a near disastrous melt-down at Three Mile Island. Engineers also point out that the PWR—which Britain intends to be built at Sizewell—may also be prone to explosive hydrogen gas production caused by the reaction of steam and alloys inside the reactor.

A US Government study four years ago showed that there had been 169 accidents that could have led to a melt-down in the country's PWR's between 1969 and 1979 alone.

● We almost lost Detroit

There have been some desperately close shaves, the Three Mile Island, which it is thought, came within half an hour of a full melt-down; at Brown's Ferry, Alabama, in 1975, where a workman's candle set fire to cables and knocked out all five emergency cooling systems on a reactor; and, at a different type of reactor, the Enrico-Fermi 1, in 1966, which prompted one engineer to comment: 'We almost lost Detroit.'

The record of the British nuclear industry does not inspire confidence that a major accident could not happen there. The Sellafield reprocessing plant has had 300 accidents, large and small, since 1950, some revealing a bewildering degree of ineptitude and bad management.